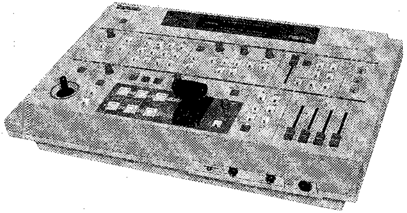
ORDER NO. AVS9303667C8

Service Manual

Production Mixer
WJ-MX30



SPECIFICATIONS

Source Input :	×2 (SOURCE 1/2)
Composite Video Input :	1.0 Vp-p/75 ohms, PAL signal, BNC×2
S-Video Input :	Y signal; 1.0 Vp-p/75 ohms, C signal; 0.3 Vp-p/75 ohms, Mini DIN 4 connector×2
Audio Input :	SOURCE 1/2; Pin-jack×2, −6 dBs/20 Kohms (Unbalanced), Left and Right.
Auxiliary Audio Input :	×1 (Aux) −6 dBs/20 Kohms, Pin-jack (Unbalanced), Left and Right
Microphone Input :	−60 dBv/600 ohms, unbalanced, tip-ring-sleeve type phone jack×1
External Camera Input :	1.0 Vp-p/75 ohms, PAL composite signal, BNC×1 Y signal; 1.0 Vp-p/75 ohms, C signal; 0.3 Vp-p/75 ohms, Min DIN 4 connector×1
GPI Input :	Make-contact, BNC×1
Character (TITLE) Input :	10-pin connector×1 for optional Character Generator WJ-KB15, WJ-KB50
Program Output :	×2 (PROGRAM OUT 1/2)
Composite Video Output :	1.0 Vp-p/75 ohms PAL signal, BNC×2
S-Video Output :	Y signal; 1.0 Vp-p/75 ohms, C signal; 0.3 Vp-p/75 ohms, Min DIN 4 connector×2
Audio Output :	PROGRAM OUT 1/2; Pin Jack×2, −6 dBs/1 Kohms (Unbalanced) Left and Right.
Preview Output :	1.0 Vp-p/75 ohms, PAL composite signal, BNC×1
Advance Sync Output :	4 Vp-p/75 ohms, BNC×2
Headphone Output :	−20 dBv - −80 dBv, 8 ohms unbalanced, tip-ring-sleeve type phone jack×1
Digital Effects :	Nega, Mosaic, Mono, Paint, Still, Strobe, A/V Synchro
Matte Colours :	Colour Bar,White, Yellow, Cyan, Green, Magenta, Red, Blue, Black.
Wipe Patterns :	107 Patterns
Joystick Control :	Positioner, Colour Correction
Audio Mixer :	Source 1, Source 2, AUX, Mic

Panasonic

Others :	Audio-Follow, Auto-Take, Auto-Fade, Memory
Video Sampling :	4 : 1 : 1, Y=14.3 MHz (936 fH), 8-bit component
Frequency Range :	Sync; 15.625 KHz±300 Hz SC; 4.433619 MHz±40 Hz
Frequency Response :	Y/C signal; 4.5 MHz (at −3 dB) Composite Video Signal; 4.5 MHz (at −3 dB) Audio; 20 - 20 KHz (at −3 dB)
Gain :	Unity (Video)
S/N (Typical) :	56 dB (S-Video), 50 dB (Composite), 70 dB (Audio at 1 KHz)
Power Source :	220 - 240V AC 50 Hz
Power Consumption :	Operation mode; Approximately 27W Stand-by mode; Approximately 4W
Ambient Operating Temperature :	0 - 40°C
Ambient Operating Humidity :	Less than 90%
Dimensions :	480 (W)×132 (H)×308 (D) mm
Weight :	4.7 kg

Weight and dimensions indicated above are approximate.
Specifications are subject to change without notice.

OPTIONAL ACCESSORIES

- Character Generator WJ-KB15, WJ-KB50

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICEING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsuland voltage within the unit may have suificient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that impotant literature concerning the operation and maintenance of this has been included.
Therefore, it should be read carefully in order to avoid any problems.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the " ⚠ " mark on the schematic diagram and the replacement parts list It is essential that these critical parts should be repleced with manufacture's specilied parts to prevent shock, fire, or other hazards.
Do not modify the original design without permission of manufacture.

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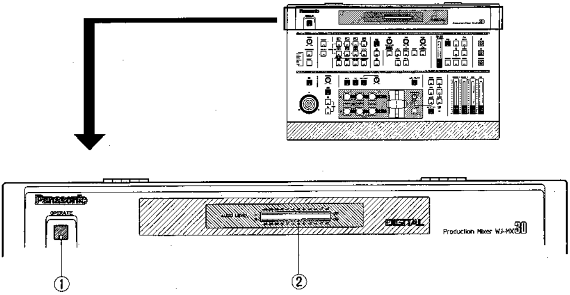
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

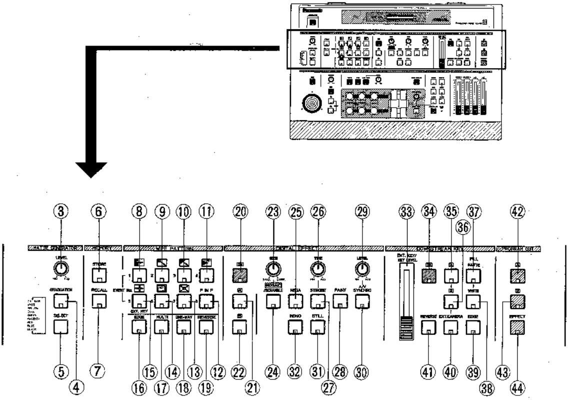
■ TOP VIEW 1



1. **Power On/Off Button (OPERATE)**
   Press this button to switch this unit on.
   The LED on this button lights and the following LEDs light up at the same, Effect On/Off Button (20), Effect-out Button (44), One-way Button (18), Straight Wipe Button (8), Effect-A Button (21), DSK-A Button (35), Fill Matte Button (37), Wipe Select Button (51), Source 1 on A-bus Button (55), Source 2 on B-bus Button (56), Audio Follow On/Off Button (59) and Black Fade Button (68).
   Note :
   The Main Power Switch (98) (located on the back) must be turned on before this switch is pressed.

2. **Audio Level Indicator (AUDIO LEVEL)**
   This indicator indicates the audio output levels of the Program Out-1 Audio Output Jacks (89) and the Program Out-2 Audio Output Jacks (92).

■TOP VIEW 2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MATTE GENERATOR
MEMORY
WIPE PATTERN
DIGITAL EFFECT
DOWNSTREAM KEY
PROGRAM OUT
LEVEL
STORE
RECALL
GRADUATION
SELECT
EVENT No.
EXT. KEY
EDGE
MULTI
ONE-WAY
REVERSE
P IN P
SIZE
MOSAIC /SCRAMBLE
NEGA
MONO
TIME
STROBE
STILL
PAINT
LEVEL
A/V SYNCHRO
EXT. KEY/ KEY LEVEL
FILL MATTE
WHITE
REVERSE
EXT.CAMERA
EDGE
EFFECT
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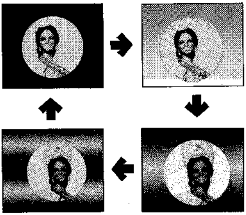
• Matte Generator Section

3. **Matte Colour Control (LEVEL, MIN/MAX)**
The Chroma Level of Matte Colour can be adjusted with this control except C/L Bar.

4. **Graduation Button (GRADUATION)**
The matte colour of the upper portion on the screen is less intense and gradually increases toward the lower portion of the screen.
The any of three graduation of three-pattern can be selected by pressing this button as shown below.

OFF

Gradation 1



Gradation 3

Gradation 2

5. **Matte Colour Selector (SELECT)**
Any one of 9 Matte Colours - Colour Bar, White, Yellow, Cyan, Green, Magenta, Red, Blue and Black - can be selected by repeatedly pressing either of these buttons as shown below.

→ C/L BAR → WHITE → YELLOW → CYAN →
→ GREEN → MAGENTA → RED → BLUE → BLACK →

• Memory Section

6. **Store Button (STORE)**
This button is used to store the preset status of all function settings in the memory.

7. **Recall Button (RECALL)**
This button is used to recall the status data that is stored in the memory using the Store Button (6).

• Wipe Pattern Section

8. **Straight Wipe Button**
This button is for a video scene wipe with a straight line. Four patterns are available.
It is also used as Event Number Button 1.

9. **Corner Wipe Button**
This button is for a video scene wipe with a square from a corner of the monitor screen. Four patterns are available.
It is also used as Event Number Button 2.

10. **Diagonal Wipe Button**
This button is for a video scene wipe with a diagonal shape. Four patterns are available.
It is also used as Event Number Button 3.

11. **Triangle Wipe Button**
This button is for a video scene wipe with a triangle sharp. Four patterns are available.
It is also used as Event Number Button 4.

12. **Picture-in-Picture Button (P IN P)**
By pressing this button repeatedly, the picture-in-picture of four types is displayed on the screen.
And also this is used as Event Number Button 8.
The position of the picture-in-picture can be chosen by using the Positioner On/Off Button (45).
When the Audio Follow Button (59) is pressed to turn on in the picture-in-picture mode, the audio level ratio between the A-bus and B-bus changes according to the position of the Mix/Wipe Lever (58).

13. **Square Wipe Button**
Four wipe patterns can be selected by pressing this button repeatedly.....circle, oval, square and diamond.
The Positioner /RGB Control Joystick (46) can be used with these patterns.
It is also used as Event Number Button 7.

14. **Mosaic Wipe Button**
A mosaic-like wipe pattern is obtained by pressing this button. Four patterns are available by repeatedly pressing this button.
It is also used as Event Number Button 6.

15. **Split Wipe Button**
A video scene is split in the centre of the image by pressing this button. Three kinds of patterns are available by repeatedly pressing this button.
And also this is used as Event Number Button 5.

16. **Wipe Edge Button (EDGE)**
This button is used for selecting a border wipe edge.
Pressing this button once selects a narrow border.
Pressing this button a second time selects a wide border.
Pressing this button a third time selects a wide soft border.
A border colour can be applied from complementary colour of matte colour which is selected by the Matte Colour Selector (5).

17. **Multi Wipe Button (MULTI)**
A wipe pattern can be multiplied by pressing this button repeatedly.
The wipe buttons (8), (9), (10), (11), (13), (14) and (15) are operative with this button.
The effect of the multiplication depends on the wipe pattern.

18. **One-way Button (ONE-WAY)**
When this button is pressed, the wipe scene moves one way each time the Mix/Wipe Lever (58) is shifted.
Without using this function, the wipe scene moves alternately with the shifting the Mix/Wipe Lever (58).

19. **Reverse Button (REVERSE)**
When this button is pressed, the movement of the wipe scene is reversed.

• Digital Effect Section

20. **Effect On/Off Button (ON)**
The selected Digital Effect Function becomes operative by pressing this button.

21. **Digital Effect A-Button (A)**
A digital effect is produced on the video signals on A-bus by pressing this button (if the Effect On/Off Button (20) is first pressed).
The condition of A-bus on which Digital Effects are produced can be seen by pressing this button. (The selected buttons light.)

22. **Digital Effect B-Button (B)**
A digital effect is produced on the video signal on B-bus by pressing this button (if the Effect On/Off Button (20) is first pressed).
The condition of B-bus on which Digital Effects are produced can be seen by pressing this button. (The selected buttons light.)

23. **Mosaic Size Control (SIZE)**
The size of mosaic pattern pieces can be adjusted by turning this control.

24. **Mosaic/Scramble Button (MOSAIC/SCRAMBLE)**
By pressing this button, mosaic-like pattern and scramble pattern can be selected.
Pressing this button once selects a mosaic-like pattern.
The size of mosaic squares can be changed using the Mosaic Size Control (23).
Pressing this button a second time selects a scramble pattern.
The size of the scramble cannot be changed.

25. **Negative Button (NEGA)**
The on-screen image can be transposed to look like a negative visual image by pressing this button.

26. **Effect Interval Time Control (TIME)**
The time of interval for the strobe effect, multi effect and trail effect can be adjusted by this timer. Also this timer works with the A/V Synchro function. In this case, the A/V Synchro interval applies to the Strobe effect.

27. **Strobe Button (STROBE)**
Video frames can be frozen intermittently to achieve a strobe effect by pressing this button. The strobe interval can be adjusted by the Effect Interval Timer (26) from approximately 0.03 seconds to 2.1 seconds.

28. **Paint Button (PAINT)**
The image can be transformed to resemble an oil painting in a video scene by pressing the button.
Four patterns are available by repeatedly pressing this button.

29. **A/V Synchro Control (LEVEL)**
This control adjusts the trigger sensitivity of the A/V Synchro. When this control is turned to the MAX position, the A/V Synchro will be triggered by (a higher threshold) high level sounds. When this control is turned to the MIN position, the A/V Synchro will be triggered by (a lower threshold) low level sounds.

30. **A/V Synchro Button (A/V SYNCHRO)**
Any combination of the digital effects (Nega, Mosaic, Mono, Paint, Still or Strobe) can be synchronized to pulse with certain levels of accompanying music or sound supplied to this unit.

31. **Still Button (STILL)**
An instant still or frozen image can be obtained by pressing this button.

32. **Mono Colour Button (MONO)**
When this button is pressed, source video signal produce a monochrome scene. This function has a priority to the Colour Correction function in operation.

• Downstream Key Section

33. **Key Slide Control (EXT. KEY/KEY LEVEL)**
This slide control is used to adjust the sensitivity of the luminance level of the DSK and EXT key signal.

34. **DSK On/Off Button (ON)**
This button is pressed to activate the Downstream Key (DSK) effect.

35. **DSK-Button (A)**
When this button is pressed, the Source Video Signal on the A-bus will become a Key-source signal.

36. **DSK-B Button (B)**
When this button is pressed, the Source Video Signal on the B-bus will become a Key-source signal.

37. **Fill Matte Button (FILL MATTE)**
When this button is pressed, the Matte Colour generated by the MATTE GENERATOR will be used as a Key-Fill Signal to be overlaid on the Key-source signal.

38. **White Button (WHITE)**
When this button is pressed, the white colour will be used as a Key-Fill Signal to be overlaid on the Key-Source Signal.

39. **Edge Button (EDGE)**
This button is used to edge Downstream Keyed images. Five kinds of edges are available by pressing this button repeatedly.
Notes :
1. When the Downstream Keyed images are white, you can colour the edges in any of 9 colours, solid or graded using the Graduation Button and the Matte Colour Selector.
2. When Matte Coloured Downstream Keyed images are used, the edges are always black.

40. **Ext. Camera Button (EXT. CAMERA)**
When this button is pressed, the external camera which is connected to the External Camera Input (84) or (85) can be used for Key-source signals.

41. **Key Reverse Button (REVERSE)**
The polarity of Downstream Keyed Images will be reversed by pressing this button.

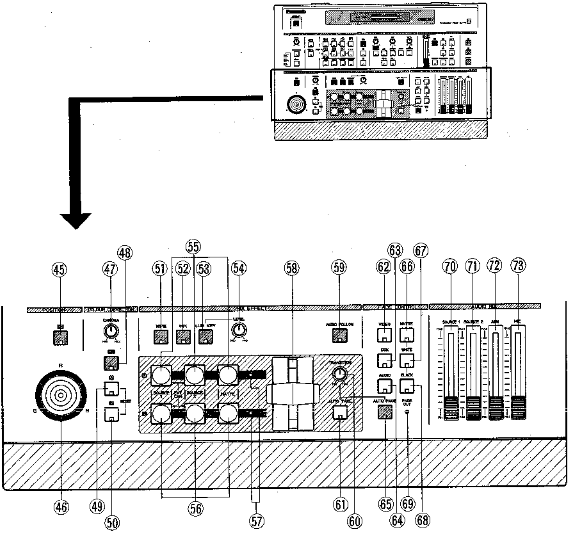
• Program Output Section

42. **Program Out-A Button (A)**
When this button is pressed, the A-bus Source signals with effects produced the functions in the Digital Effect section are available at the Program Output Connectors.

43. **Program Out-B Button (B)**
When this button is pressed, the B-bus Source signals with effects produced by the functions in the Digital Effect function are available at the Program Output Connectors.

44. **Effect-Out Button (EFFECT)**
When this button is pressed the final video signal with or without effects is available at the Program Output Connector.

■ TOP VIEW 3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CHROMA
WIPE
MIX
LUM KEY
LEVEL
AUDIO FOLLOW
VIDEO
MATTE
DSK
WHITE
AUDIO
BLACK
TRANSITION
AUTO TAKE
AUTO FADE
FADE OUT
SOURCE 1
SOURCE 2
AUX
MIC
R
G
B
RESET
SOURCE
MATTE

• Position Section

45. Position On/Off Button (ON)
This button must be pressed to set the position of a wipe pattern freely using the Positioner/RGB Control Joystick (46).

46. Positioner/RGB Control Joystick
This joystick has two functions of setting the position of a wipe pattern and controlling the hue of the source video signal (A or B).
When the Position On/Off Button (45) is pressed on, this joystick functions as the positioner.
When the Colour Correction On/Off Button (48) is pressed on, this joystick functions as the RGB control.
When it is in the centre, it generates the original colour of the source video signal.

• Colour Correction Section

47. Chroma Level Control (CHROMA)
This control adjusts the colour level of the images from the Source Video Signal. When this control is set to the centre position, it generated the original colour level of the Source Video Signal.

Note :
Noise may be recorded on tape when this control is set to the MAX position if colour input signals are excessive.

48. Colour Correction On/Off Button (ON)
This button must be pressed to correct the colour of the source video signal.

49. Colour Correction-A Button (A / RESET)
Colour correction can be made on the A-bus Source Video Signal by pressing this button. When you press it once, the LED starts blinking, the chroma level can be adjusted by using the Chroma Level Control (47).
When you press it a second time, the LED remains lighted, and the hue can be adjusted by using the Position/RGB Control Joystick (46). Chroma level can also be adjusted by using the Chroma Level Control (47).
It is also used as Reset Button.

50. Colour Correction-B Button (B / RESET)
Colour correction can be made on the B-bus Source Video Signal by pressing this button. When you press it once, the LED starts blinking, the chroma level can be changed by using the Chroma Level Control (47).
When you press a second time, the LED remains lighted, the hue can be changed by using the Position/RGB Control Joystick (46). Chroma level can also be adjusted by using the Chroma Level Control (47).
It is also used as Reset Button.

• Mix Effect Section

51. Wipe Selection Button (WIPE)
This button is pressed to obtain a wipe effect on the A-bus Source Video Signal and the B-bus Source Video Signal depending on the setting of the Wipe Pattern Select Buttons.
It is also used as automatic demonstration button.
Press the Power On/Off Button to turn off.
Then press the Power On/Off Button again to turn on while pressing both of this button and Mix Select Button (52).

52. Mix Select Button (MIX)
This button is pressed to obtain a mix effect on the A-bus Source Video Signal and the B-bus Source Video Signal depending on the settings of the Wipe Pattern Select Buttons.

53. Luminance Key Select Button (LUM KEY)
The Luminance Key effect is obtained by pressing this button and adjusting the Luminance Key Level Control (54). The B-bus Source Signal must be the key signal.

54. Luminance Key Level Control (LEVEL)
This control is used to adjust the Luminance Key Level.

55. A-bus Buttons (A)
These buttons are used to select the desired audio/video signals allocated to the A-bus input. The Source 1/2 corresponds to the Source 1/2 audio/video inputs on the rear panel of the instrument.
By pressing the Source 1 and 2 buttons on the A-bus simultaneously, External Video Signals can be selected.

56. B-bus Buttons (B)
These buttons are used to select the desired audio/video signals allocated to the B-bus input. The Source 1/2 corresponds to the Source 1/2 audio/video inputs on the rear panel of the instrument.
By pressing the Source 1 and 2 buttons on the B-bus simultaneously, the External Video Signals can be selected.

57. Mix/Wipe LED
When the A-bus (B-bus) LED remains lighted and the Wipe / Mix LED blinks, the Wipe / Mix effect is only partially produced on the A-bus (or B-bus) side.

58. Mix/Wipe Lever
In wipe mode, manually moving this lever between the A-bus and B-bus will increase the relative portion of each bus signal according to the option selected. In mix mode, the audio and video are switched together on the A-bus and B-bus.

59. Audio Follow Button (AUDIO FOLLOW)
By pressing this button, the audio on the A-bus and B-bus can be changed according to the relative percentage position of the Mix/Wipe Lever (58).

60. Auto Fade/Take Transition Control (TRANSITION)
This control adjusts the automatic fading/auto-take interval time from 0 to 510 frames at 2-frame increments.

61. Auto Take Button (AUTO TAKE)
The auto take effect-Automatic Wipe / Mix-can be executed by pressing this button. This button lights during the Auto-take interval.

• Fade Control Section

62. Video Fade Button (VIDEO)
Video program output signal fade-in or fade-out is available with this button.
Use the Auto Fade Button (65) to select fade-out or fade-in.

63. DSK Fade Button (DSK)
Downstream Keyed signal fade-in or fade-out is available with this button.
Use the Auto Fade Button (65) to select fade-out or fade-in.

64. Audio Fade Button (AUDIO)
Fade-in or fade-out of the audio recording output is available with this button.
Use the Auto Fade Button (65) to select fade-out or fade-in.

Note :
The fade-out or fade-in of Head phone output is cannot be selected.

65. **Auto Fade Button (AUTO FADE)**
Press this button on for fade-out.
The LED on this button will light and the fade-out will start.
The transition time can be adjusted using the Auto Fade/Take Transition Control (60).
After fade-out, the LED on this button will go out and Fade Out Indicator (69) will light.

Note :

The Fade Out Indicator blinks during fade-out.
Press this button on for fade-out when the Fade Out Indicator is blinking.
The LED on this button will light and fade-in will start and the Fade Out Indicator (69) blinks.
After fade-in, the LED on this button will go out.

66. **Matte Fade Button (MATTE)**
The video fade signal fades out to the selected Matte Colour when this button is pressed.

67. **White Fade Button (WHITE)**
The video fade signal fades out to white when this button is pressed.

68. **Black Fade Button (BLACK)**
The video fade signal fades out to black when this button is pressed.

69. **Fade Out Indicator (FADE OUT)**
When this LED remains lighted, fade-out is under way.
When this LED blinks, fade-out/fade-in is still incomplete.

• Audio Mix Section

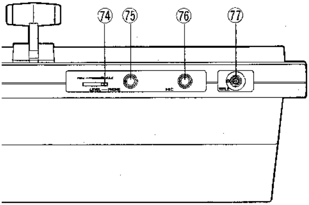
70. **Source 1 Audio Fader (SOURCE 1)**
The audio level of the Source 1 input can be adjusted by sliding this fader.

71. **Source 2 Audio Fader (SOURCE 2)**
The audio level of the Source 2 input can be adjusted by sliding this fader.

72. **Aux Audio Fader (AUX)**
The audio level connected to the Auxiliary Audio Input Jack (86) can be adjusted by sliding this fader.

73. **Microphone Fader (MIC)**
The audio level connected to the Microphone Jack (76) can be adjusted by sliding this fader.

■ FRONT VIEW



74. **Headphone Level Control (LEVEL)**
The audio level of the headphone can be adjusted with this control.

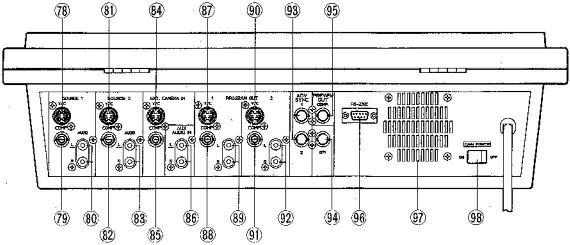
75. **Headphone Jack (PHONES)**
Optional headphone can be connected to this jack.

76. **Microphone Jack (MIC)**
Optional microphone can be connected to this jack.

77. **Title Input Connector (TITLE)**
This connector is used to connect the optional Character Generator WJ-KB50 (recommended).
The pin numbers are as follows.

(1) : Character In
(2) : Red
(3) : Ground
(4) : Green
(5) : Sync out
(6) : Blue
(7) : Ground
(8) : +9V Out
(9) : Ground
(10) : ID

■ REAR VIEW



78. **Source 1 Y/C Input Connector (SOURCE 1-Y/C)**
This connector accepts the S-video signal.
Note :
This input has a priority over that of the COMP. Connector for Source 1. If the S-video signal and the composite signal are both supplied Source 1 at the same time, only the S-video signal is used as a Source 1 Video signal.

79. **Source 1 COMP. Input Connector (SOURCE 1/COMP)**
This connector accepts a 1.0 Vp-p/75 ohms composite video signal.

80. **Source 1 Audio Input Jacks (SOURCE 1/AUDIO L/R)**
The Source 1 Audio Input Signal can be supplied via these pin jacks.

81. **Source 2 Y/C Input Connector (SOURCE 2-Y/C)**
This connector accepts the S-video signal.
Note :
This input has a priority over the COMP. Connector for Source 2. If the S-video signal and the composite signal are both supplied to Source 2 at the same time, only the S-video signal is used as a Source 2 Video Signal.

82. **Source 2 COMP. Input Connector (SOURCE 2/COMP.)**
This connector accepts a 1.0 Vp-p/75 ohms composite video signal.

83. **Source 2 Audio Input Jacks (SOURCE 2/AUDIO L/R)**
The Source 2 Audio Input Signal can be supplied via these pin jacks.

84. **External Y/C Input Connector (EXT CAMERA IN/Y/C)**
The external camera to be used as a Key Source is connected to this connector when the camera signal is S-video.

85. **External COMP. Input Connector (EXT CAMERA IN/COMP.)**
The external camera to be used as a Key Source is connected to this connector when the camera signal is composite video.

86. **Auxiliary Audio Input Jacks (AUX AUDIO IN)**
The auxiliary audio input signal can be supplied via these jacks. When an audio signal is supplied to the L-channel, it is also supplied to the R-channel (mono mode) internally. When an audio signal is supplied to the R-channel, it is used for the R-channel only.

87. **Program Out-1 Y/C Output Connector (PROGRAM OUT 1/Y/C)**
The S-video Program Output Signal-1 is provided via this connector.

88. **Program Out-1 COMP. Output Connector (PROGRAM OUT 1/COMP.)**
The composite video Program Output Signal-1 is provided via this connector.

89. **Program Out-1 Audio Output Jacks (PROGRAM OUT 1 L/R)**
The audio output signals of R-channel and L-channel from Program Output 1 are supplied via these pin jacks.

90. Program Out-2 Y/C Output Connector (PROGRAM OUT 2/Y/C)
The S-video Program Output Signal-2 is provided via this connector.

91. Program Out-2 COMP. Output Connector (PROGRAM OUT 2/COMP.)
The composite video Program Output Signal-2 is provided via this connector.

92. Program Out-2 Audio Output Jacks (PROGRAM OUT 2 L/R)
The audio output signals of R-channel and L-channel from Program Output 1 are supplied via these jacks.

93. Advance Sync Output Connectors (ADV SYNC)
In the A/B Roll Editing System, the Advance Sync signal from this connector should be supplied to a playback VTR which does not have a Time Base Corrector (T.B.C.) inside.

Note :

Enough editing accuracy cannot be obtained without this signal.

94. GPI Input Connector (GPI)

95. Preview Output Connector (PREVIEW OUT, COMP)
The video effect of the composite video signal is obtained at this connector regardless of which Program Out Button is selected, (42) or (43).

96. RS-232C Control Connector (RS-232C)
Ask your the Panasonic Dealer for communication software.

97. Cooling Fan

98. Main Power Switch (MAIN POWER)
The unit is in stand-by mode when this switch is pressed on. Unless this switch is pressed on, the unit will not be on even if the (front panel) Power On/Off Button (1) is pressed.

Note :

The unit is switched on without pressing Power On/Off Switch (1) if the Main Power Switch is pressed on.

ADJUSTMENT PROCEDURE

1. Test Equipment Required

The following test equipments are required for adjustment.

- Oscilloscope
- Frequency Counter
- Digital Voltmeter
- Vectorscope
- Waveform Monitor
- Underscanned Color Video Monitor
- Y/C Test Signal Generator
- SC-H Vectorscope (Tektronix 1751 or equivalent)
- Audio Signal Generator
- Audio Level Meter

2. Disassembling Procedure for Adjustment

- Referring to the Fig. 2-1, remove eleven screws fixing the Upper Cover.

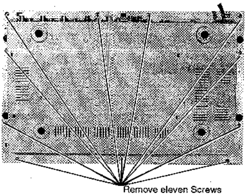


Fig. 2-1

- Referring to the Fig. 2-2, open the Upper Cover and secure it using the Hook L.

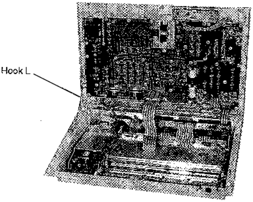


Fig. 2-2

- Referring to the Fig. 2-3, remove four screws fixing the Shield Cover and remove the Shield Cover, and then remove four screws fixing the Analog Board to the Bottom Cover.

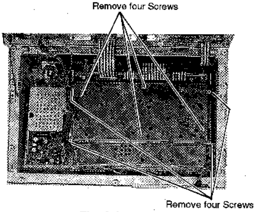


Fig. 2-3

- Referring to the Fig. 2-4, stand up the Analog Board and hook both sides of the Analog Board to the Mounting Angles of the Bottom Cover, and then remove the Shield Cover using screwdriver.

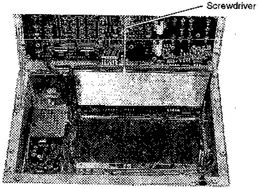


Fig. 2-4

- Referring to the Fig. 2-5, remove eight screws fixing the Shield Cover and remove the Shield Cover, and then remove four screws fixing Digital Board to the Bottom Cover.

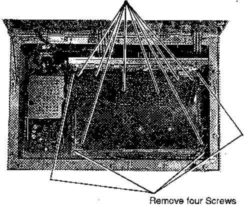


Fig. 2-5

- Referring to the Fig. 2-6, stand up the Digital Board and hook both sides of the Digital Board to the Mounting Angles of the Bottom Cover, and then remove the Shield Cover using screwdriver.

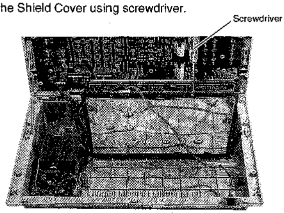


Fig. 2-6

3. Connection and precaution for Adjustment

3.1. Connection

- The Fig. 3-1 shows the connecting diagram for the adjustment procedure.

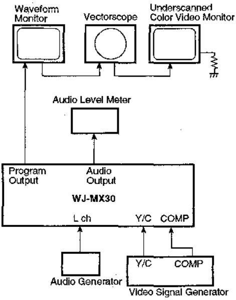


Fig. 3-1

- Connect the Underscanned Color Video Monitor to the Program Out 1 COMP Connector on the Rear Panel of the Production Mixer WJ-MX30 through the Waveform Monitor and the Vectorscope using the coaxial cables.
- Terminate the input terminal of the Underscanned Color Video Monitor with 75 ohms.
- Connect the Audio Signal Generator to the L channel of the Source 1 Audio Input Jack on the Rear Panel using the Pin-plug cable.
- Connect the Y/C Test Signal Generator to the Source 1 Y/C Input Connector and the Source 2 COMP Input Connector on the Rear Panel.
- Connect the AC Millivoltmeter with dB measure to L channel of the Program Out 1 Audio Output Jack on the Rear Panel using the Pin-plug cable.
- Connect the prove of the Digital Voltmeter or Oscilloscope to the desired test point in each adjument step.

3.2. Precaution

- This adjustment should be made after 10 min. warm up of the WJ-MX30.
- The gate time response of the Frequency Counter will be slow.

4. Adjustment Procedure

- Refer to the Location of the Test Points and the Adjusting Controls on page 20.

(1) 5V Adjustment

Test Point:	**TP1 (5V)**	**Analog Board**
Adjust:	**VR1 (5V)**	**Power Board**

- Disconnect all input signals from the WJ-MX30.
- Connect the Digital Voltmeter to TP1.
- Adjust VR1 to obtain 5 ± 0.05V.

(2) FSC Adjustment

Test Point:	**TP7 (FSC)**	**Digital Board**
Adjust:	**VR1 (FSC)**	**Digital Board**

- Disconnect all input signals from the WJ-MX30.
- Connect the Frequency Counter to TP7.
- Adjust VR1 to obtain 4.433629MHz ± 5Hz.

(3) Read VCO Adjustment

Test Point:	**TP8 (READ VCO)**	**Digital Board**
Adjust:	**L33 (READ VCO)**	**Digital Board**

- Disconnect all input signals from the WJ-MX30.
- Connect the Digital Voltmeter to TP8.
- Adjust L33 to obtain 2.1 ± 0.1V.

(4) Write Ach VCO Adjustment

Test Point: **TP1 (WRITE ACH VCO) Digital Board**
Adjust: **L32 (WRITE ACH VCO) Digital Board**

- Connect the Digital Voltmeter to TP1.
- Supply the Color Bar Signal with Y/C components to the Source 1 Y/C Connector
- Press the Source 1 Switch of the BUS-A.
- Adjust L32 to obtain 2.1 ± 0.1V.

(5) Write Bch VCO Adjustment

Test Point: **TP3 (WRITE BCH VCO) Digital Board**
Adjust: **L31 (WRITE BCH VCO) Digital Board**

- Connect the Digital Voltmeter to TP3.
- Supply the Color Bar signal with Y/C components to the Source 2 Y/C Connector.
- Press the Source 2 Switch of the BUS-B.
- Adjust L31 to obtain 2.1 ± 0.1V.

(6) Program Out Y Gain Adjustment

Test Point: **Program Out Y/C Connector Rear Panel**
Adjust: **VR8 (PROGOUT Y-GAIN) Analog Board**

- Terminate between Y terminal and Ground terminal of the Program Out 1 Y/C Connector with 75 ohms.
- Connect the Oscilloscope across the 75 ohms.
- Output the internal Color Bar signal to the Program Out 1 Y/C Connector.
- Adjust VR8 so that the white level becomes 700 ± 14mV as shown in the Fig. 4-1.

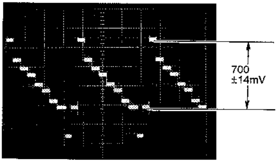


Fig. 4-1

Test Point: **Program Out Y/C Connector Rear Panel**
Adjust: **VR9 (PROGOUT C-GAIN) Analog Board**

- Terminate between C terminal of the Program Out 1 Y/C Connector with 75 ohms.
- Connect the Oscilloscope across the 75 ohms.
- Output the internal Color Bar signal to the Program Out 1 Y/C Output Connector.
- By observing the Vectorscope, adjust VR9 so that each vector positions in each color area as shown in the Fig. 4-2-1.

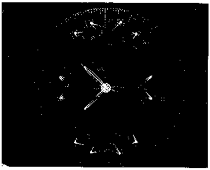


Fig. 4-2-1

- Confirm that the burst level becomes 300 ± 30mV as shown in the Fig. 4-2-2.

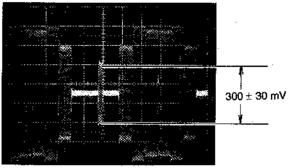


Fig. 4-2-2

(8) Program Out COMP Gain Adjustment

Test Point: **Program Out COMP Connector Rear Panel**
Adjust: **VR31 (PROGOUT COMP GAIN) Analog Board**

- Connect the Video Monitor to the Program Out COMP Connector, then terminate the input terminal of the Video Monitor with 75 ohms.

- Connect the Oscilloscope to the Program Out COMP Connector.
- Output the internal Color Bar signal to the Program Out 1 COMP Connector.
- Adjust VR31 so that the white level becomes 700 ± 14mV as shown in the Fig. 4-3.

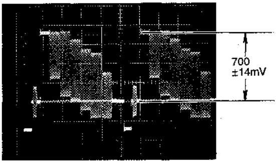


Fig. 4-3

(9) Preview Y Gain Adjustment

Test Point: **Preview Out Connector**
Rear Panel
Adjust: **VR11 (PREV Y-GAIN)**
Analog Board

- Connect the Video Monitor to the Preview Out Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the Preview Out Connector.
- Output the internal Color Bar signal to the Preview Out Connector.
- Adjust VR11 so that the white level becomes 700 ± 14mV as shown in the Fig. 4-4.

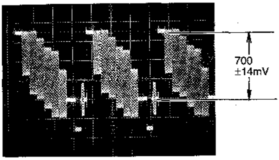


Fig. 4-4

(10) Preview C Gain Adjustment

Test Point: **Preview Out Connector**
Rear Panel
Adjust: **VR13 (PREV C-GAIN)**
Analog Board

- Connect the Video Monitor to the Preview Out Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the Preview Out Connector.
- Output the internal Color Bar signal to the Preview Out Connector.
- By observing the Vectorscope, adjust VR13 so that each vector positions in each color area as shown in the Fig. 4-5-1.

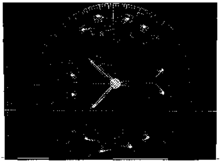


Fig. 4-5-1

- Confirm that the burst level becomes 300 ± 30mV as shown in the Fig. 4-5-2.

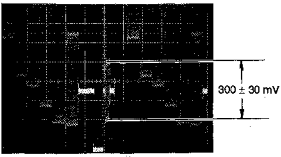


Fig. 4-5-2

(11) Program Out SC-H Adjustment

Test Point: **Program Out COMP Connector**
Rear Panel
Adjust: **VR5 (PROGOUT SC-H)**
Analog Board

- Connect the SC-H Vectorscope to the Program Out

1 COMP Connector, then terminate the input terminal of the SC-H Vectorscope with 75 ohms.

- Output the internal Color Bar signal to the Program Out 1 COMP Connector.
- Adjust VR5 by observing the SC-H Vectorscope to obtain 0 ± 5° .

Note: The phase difference between in and out of the External Camera signal should be within ± 5°

(12) Preview Out SC-H Adjustment

Test Point: **Preview Output Connector Rear Panel**
Adjust: **VR7 (PREV SC-H) Analog Board**

- Connect the SC-H Vectorscope to the Preview Out Connector, then terminate the input terminal of the SC-H Vectorscope with 75 ohms.
- Output the internal Color Bar signal to the Preview Output Connector.
- Adjust VR7 by observing the SC-H Vectorscope to obtain 0 ± 5° .

Note: The phase difference between in and out of the External Camera signal should be within ±5° .

(13) Ach FVCXO Adjustment

Test Point: **TP11 (ACH FVCXO) Analog Board**
Adjust: **CT2 (ACH FVCXO) Analog Board**

- Disconnect all input signals from the WJ-MX30.
- Connect the Frequency Counter to TP11.
- Adjust CT2 to obtain 4.433629MHz ± 5Hz.

(14) Ach Burst-Gate-Pulse Width Adjustment

Test Point: **TP10 (ACH BGP WIDTH) Analog Board**
Adjust: **VR21 (ACH BGP WIDTH) Analog Board**

- Connect the Oscilloscope to TP10.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 1 Y/C Connector.
- Select the Source 1 of the BUS-A.
- Adjust VR21 to obtain the pulse width of 7.8 ± 0.1 μ-sec. as shown in the Fig. 4-6.

Note: Use TP16 (CSYNCA) on the Analog Board for the trigger for the Oscilloscope.

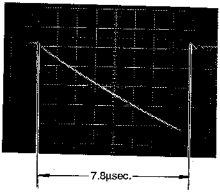


Fig. 4-6

(15) Ach Carrier Balance Adjustment

Test Point: **Program Out Y/C Connector Rear Panel**
Adjust: **VR28 (ACH CAR BAL-1) Analog Board**
VR30 (ACH CAR BAL-2) Analog Board

- Connect the Video Monitor through the Waveform Monitor and Vectorscope to the Program Out 1 Y/C Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 1 Y/C Connector on the Rear Panel.
- Select the A of the PROGRAM OUT section.
- Select the Source 1 of the BUS-A.
- Increase the Gain Control of the Vectorscope.
- Adjust VR28 and VR30 so that the vector positions at the center on the Vectorscope as shown in the Fig. 4-7.

Note: Color Correction of the WJ-MX30 should be off.

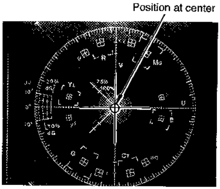


Fig. 4-7

(16) Ach Pedestal Adjustment

Test Point: **Program Out Y/C Connector**
Rear Panel
Adjust: **VR29 (ACH PEDESTAL)**
Analog Board

- Connect the Video Monitor through the Waveform Monitor and Vectorscope to the Program Out 1 Y/C Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the the Y terminal of the Program Out 1 Y/C Connector.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 1 Y/C Connector.
- Select the A of the PROGRAM OUT section.
- Select the Source 1 of the BUS-A.
- Adjust VR29 so that the black level of the RAMP signal becomes 0 $^{+14}_{-0}$ mV as shown in the Fig. 4-8.

Note: The black level of the RAMP signal should not be lower than 0V.

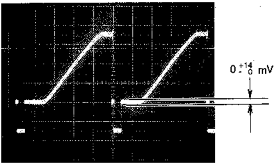


Fig. 4-8

(17) Ach Y Gain Adjustment

Test Point: **Program Out Y/C Connector**
Rear Panel
Adjust: **VR26 (ACH Y-GAIN)**
Analog Board

- Connect the Video Monitor through the Waveform Monitor and Vectorscope to the Program Out 1 Y/C Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the the Y terminal of the Out 1 Y/C Connector.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 1 Y/C Connector on the Rear Panel.
- Select the A of the PROGRAM OUT section.
- Select the Source 1 of the BUS-A.
- Adjust VR26 so that the white level of the RAMP signal becomes 700 ± 14mV as shown in the Fig. 4-9.

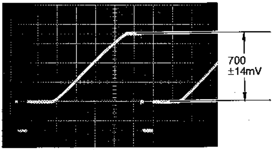


Fig. 4-9

(18) Ach TINT and C Gain Adjustment

Test Point: **Program Out Y/C Connector**
Rear Panel
TP18 (R-YA) **Analog Board**
Adjust: **VR22 (ACH C-GAIN)**
Analog Board
VR25 (ACH TINT) **Analog Board**

- Connect the Video Monitor through the Waveform Monitor and Vectorscope to the Program Out 1 Y/C Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to TP18.
- Supply the Color Bar signal to the Source 1 COMP Connector.
- Select the A of the PROGRAM OUT section.
- Select the Source 1 of the BUS-A.
- Adjust VR22 and VR25 by observing the Vectorscope so that each vector positions in each color area as shown in the Fig. 4-10-1.

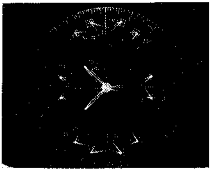
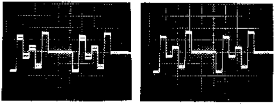


Fig. 4-10-1

- Adjust VR25 so that the waveform coincides as shown in the Fig. 4-10-2.
Note: Supply the Black Burst signal from WJ-MX30

to the Vectorscope for the reference Sync signal.



NO GOOD GOOD

Fig. 4-10-2

(19) Bch FVCXO Adjustment

Test Point: TP8 (BCH FVCXO) Analog Board
Adjust: CT1 (BCH FVCXO) Analog Board

- Disconnect all input signals from the WJ-MX30.
- Connect the Frequency Counter to TP8.
- Adjust CT1 to obtain 4.433629MHz ± 5Hz.

(20) Bch Burst-Gate-Pulse Width Adjustment

Test Point: TP7 (BCH BGP WIDTH)
Analog Board
Adjust: VR14 (BCH BGP WIDTH)
Analog Board

- Connect the Oscilloscope to TP7.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 2 Y/C Connector on the Rear Panel.
- Select the Source 2 of the BUS-B.
- Adjust VR14 to obtain the pulse width of 7.8 ± 0.1 μ sec. as shown in the Fig. 4-11.

Note: Use TP15 (CSYNCB) on the Analog Board for the trigger for the Oscilloscope.

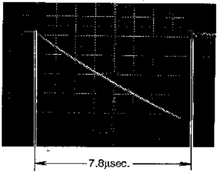


Fig. 4-11

(21) Bch Carrier Balance Adjustment

Test Point: Program Out Y/C Connector
Rear Panel
Adjust: VR16 (BCH CAR BAL-1)
Analog Board
VR18 (BCH CAR BAL-2)
Analog Board

- Connect the Video Monitor through the Waveform Monitor and Vectorscope to the Program Out 1 Y/C Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 2 Y/C Connector on the Rear Panel.
- Select the B of the PROGRAM OUT section.
- Select the Source 2 of the BUS-B.
- Increase the Gain Control of the Vectorscope.
- Adjust VR16 and VR18 so that the vector positions at the center on the Vectorscope as shown in the Fig. 4-12.

Note: Color Correction of the WJ-MX30 should be off.

Position at center

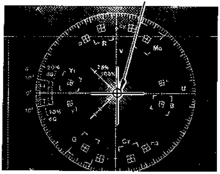


Fig. 4-12

(22) Bch Pedestal Adjustment

Test Point: Program Out Y/C Connector
Rear Panel
Adjust: VR17 (BCH PEDESTAL)
Analog Board

- Connect the Video Monitor through the Waveform Monitor and Vectorscope to the Program Out 1 Y/C Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the Y terminal of the Program Out 1 Y/C Connector.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 1 and 2 Y/C Connectors.

- Select the B of the PROGRAM OUT section.
- Select the horizontal wipe pattern (⬓) and wipe the signal at the black portion.
- Adjust VR17 so that the black level of the RAMP signal becomes $0\,^{+14}_{-0}$ mV as shown in the Fig. 4-13.

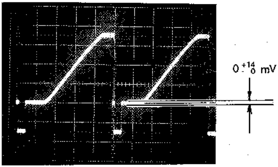


Fig. 4-13

(23) Bch Y Gain Adjustment

Test Point: **Program Out Y/C Connector**
Rear Panel
Adjust: **VR20 (BCH Y-GAIN)**
Analog Board

- Connect the Video Monitor through the Waveform Monitor and Vectorscope to the Program Out 1 Y/C Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the Y terminal of the Program Out 1 Y/C Connector.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 2 Y/C Connector on the Rear Panel.
- Select the B of the PROGRAM OUT section.
- Select the Source 2 of the BUS-B.
- Adjust VR20 so that the white level of the RAMP signal becomes 700 ± 14mV as shown in the Fig. 4-14.

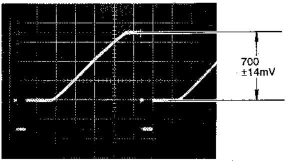


Fig. 4-14

(24) Bch TINT and C Gain Adjustment

Test Point: **Program Out Y/C Connector**
Rear Panel
TP13 (R-YB) **Analog Board**
Adjust: **VR15 (BCH C-GAIN)**
Analog Board
VR19 (BCH TINT) **Analog Board**
VR22 (ACH C-GAIN)
Analog Board
VR25 (ACH TINT) **Analog Board**

- Connect the Oscilloscope to TP13.
- Supply the Color Bar signal with the Y/C components to the Source 1 and 2 Y/C Input Connectors.
- Select the B of the PROGRAM OUT section.
- Adjust VR15 and VR19 by observing the Vectorscope so that each vector positions in each color area as shown in the Fig. 4-15-1.

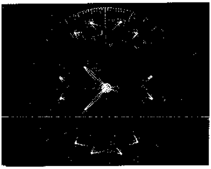
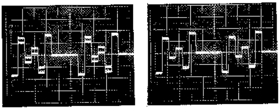


Fig. 4-15-1

- Adjust VR19 so that the waveform coincides as shown in the Fig.4-15-2.
  Note: Supply the Black Burst signal from WJ-MX30 to the Vectorscope for the reference Sync signal.



NO GOOD GOOD

Fig. 4-15-2

- Select the horizontal wipe pattern (⬓) and wipe the signal at the center of the picture.
- Adjust VR22, VR25, VR15, and VR19 so that each vector positions to the respective color area.

(25) Bch COMP Gain Adjustment

Test Point: **Program Out Y/C Connector**
Rear Panel
Adjust: **VR6 (BCH COMP GAIN)**
Analog Board

- Connect the Video Monitor to the Program Out 2 COMP Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the Program Out 2 COMP Connector.
- Supply the RAMP signal (Y = 0.7V, APL = 50%) with the Y/C components to the Source 1 Y/C Connector and the composite RAMP signal to the Source 2 COMP Connector.
- Select the horizontal wipe pattern (⬓) and wipe the signal at the black portion.
  Adjust VR6 so that the white level of the RAMP signal becomes 700 ± 14mV as shown in the Fig. 4-16.

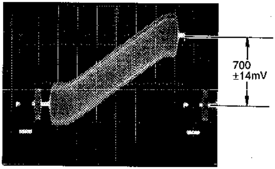


Fig. 4-16

(26) Ach COMP Gain Adjustment

Test Point: **Program Out COMP Connector**
Rear Panel
Adjust: **VR10 (ACH COMP GAIN)**
Analog Board

- Connect the Video Monitor the Program Out 1 COMP Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the Program Out 1 COMP Connector.
- Supply the composite RAMP signal (Y = 0.7V, APL = 50%) with the Source 1 and 2 COMP Connectors.
- Select the horizontal wipe pattern (⬓) and wipe the signal at the white portion.
- Adjust VR10 so that the white level of the RAMP signal becomes 700 ± 14mV as shown in the Fig. 4-17.

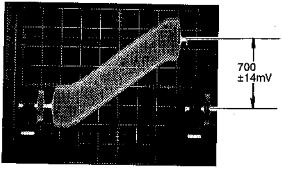


Fig. 4-17

(27) Ach/Bch H-Phase Adjustment

Test Point: **Program Out COMP Connector**
Rear Panel
Adjust: **VR24 (A-B H PHASE)**
Analog Board

- Connect the Video Monitor to the Program Out COMP Connector, then terminate the input terminal of the Video Monitor with 75 ohms.
- Connect the Oscilloscope to the Program Out COMP Connector.
- Supply the composite CROSS HATCH signal to the Source 1 and 2 COMP Input Connectors.
- Press the MIX Switch of the MIX EFFECT section and mix both Source 1 and Source 2 signals with 50/50 percent.
- Adjust VR24 so that the signal level becomes maximum as shown in the Fig. 4-18.

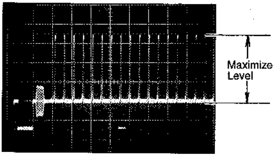


Fig. 4-18

(28) Audio Rch Adjustment

Test Point: **RCH Audio Level Meter** **Upper Cover**
Adjust: **VR5 (RCH METER)** **Audio Board**

- Supply the audio signal (1kHz, -18dBs) to the L channel of the Source 1 Audio Pin Jack.
- Slide both of the Volume Controls Source 1 and Source 2 on the AUDIO MIX Section to the maximum position.
- Connect the Audio Level Meter to the L channel of the Program Out 1 Audio Jack.
- Adjust the output level of the Audio Signal Generator to obtain -6dBs on the Audio Level Meter.
- Adjust VR5 so that the R channel of the Audio Level Meter of the WJ-MX30 indicates 0 dB (just light off the 2 dB Indicator).

(29) Audio Lch Adjustment

Test Point: **LCH Audio Level Meter** **Upper Cover**
Adjust: **VR6 (LCH METER)** **Audio Board**

- Supply the audio signal (1kHz, -18dBs) to the L channel of the Source 1 Audio Pin Jack.
- Connect the Audio Level Meter to the L channel of the Program Out 1 Audio Jack.
- Slide both of the Volume Controls Source 1 and Source 2 on the AUDIO MIX Section to the maximum position.
- Adjust the output level of the Audio Signal Generator to obtain -6dBs on the Audio Level Meter.
- Adjust VR6 so that the L channel of the Audio Level Meter of the WJ-MX30 indicates 0 dB (just light off the 2 dB Indicator).

(30) Wipe Level Adjustment

Test Point: **Pins 1 and 3 of CN23** **Switch Board**
Adjust: **VR12 (H LEVEL)** **Switch Board**
VR13 (L LEVEL) **Switch Board**

- Connect the Digital Voltmeter to the pin 1 (+ REF) of CN23.
- Adjust the VR12 to obtain 5.2 ± 0.05V.
- Connect the Digital Voltmeter to the pin 3 (- REF) of CN23.
- Adjust the VR13 to obtain - 0.2 ± 0.02V.
- Move the Wipe Lever to both BUS-A side and BUS-B side, confirm that there are 10mm clearance in between the Lever and front surface of the Upper Cover as shown in the Fig. 4-19.

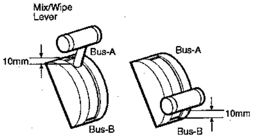
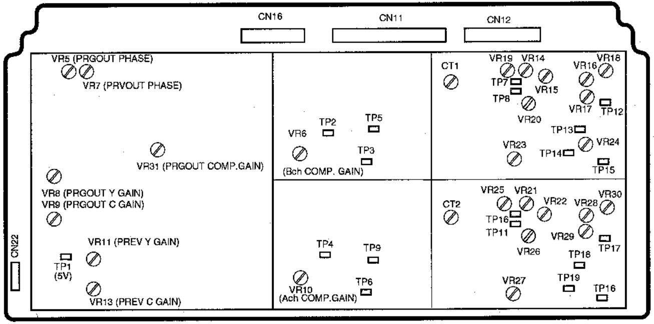


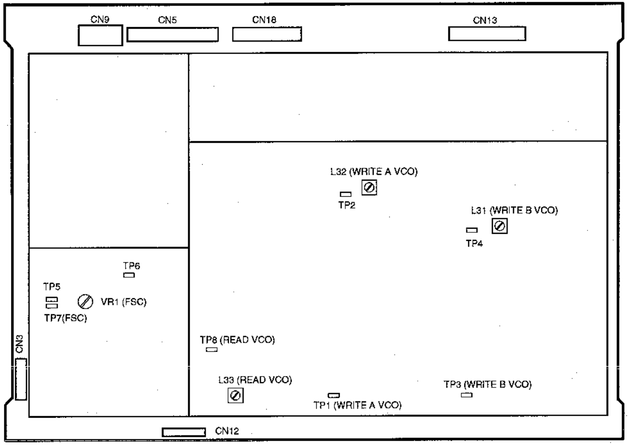
Fig. 4-19

LOCATION OF TEST POINT AND ADJUSTING CONTROLS

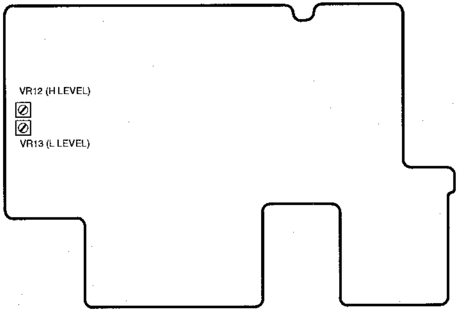
ANALOG BOARD


CN16
CN11
CN12
CN22
VR5 (PRGOUT PHASE)
VR7 (PRVOUT PHASE)
VR31 (PRGOUT COMP.GAIN)
VR8 (PRGOUT Y GAIN)
VR9 (PRGOUT C GAIN)
VR11 (PREV Y GAIN)
TP1
(5V)
VR13 (PREV C GAIN)
TP2
TP5
VR6
TP3
(Bch COMP. GAIN)
TP4
TP9
VR10
(Ach COMP.GAIN)
TP6
CT1
VR19
VR14
VR18
VR16
TP7
VR15
TP8
VR17
TP12
VR20
TP13
VR23
VR24
TP14
TP15
CT2
VR25
VR21
VR22
VR28
VR30
TP16
TP11
VR29
TP17
VR26
TP18
VR27
TP19
TP16

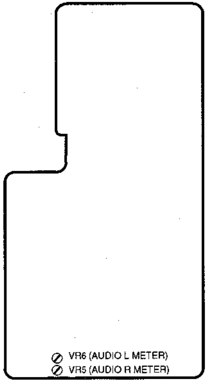
DIGITAL BOARD


CN9
CN5
CN18
CN13
L32 (WRITE A VCO)
TP2
L31 (WRITE B VCO)
TP4
TP6
TP5
VR1 (FSC)
TP7(FSC)
CN3
TP8 (READ VCO)
L33 (READ VCO)
TP1 (WRITE A VCO)
TP3 (WRITE B VCO)
CN12

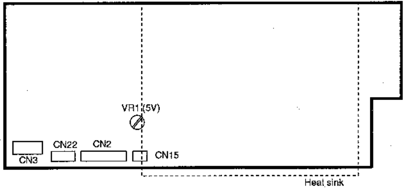
SWITCH BOARD


VR12 (H LEVEL)
VR13 (L LEVEL)

AUDIO BOARD


VR6 (AUDIO L METER)
VR5 (AUDIO R METER)

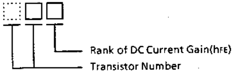
POWER BOARD


VR1 (5V)
CN3
CN22
CN2
CN15
Heat sink

CHIP COMPONENTS

1. Chip Transistor

The transistor number is indicated on the top surface of the chip transistor using two alphabet letters or one numerical and two alphabet letters.



Transistor Number

(Chip Transistor)

Letter	Transistor No.	Letter	Transistor No.
A	2SB709	X	2SD602A
B	2SB709A	Y	2SD601
C	2SB710	Z	2SD601A
D	2SB710A	1A	2SB799
E	2SA1022	1B	2SB814
F	2SA1034	1C	2SB902
H	2SA1035	1F	2SK321
I	2SB792	1K	2SK316
K	2SC2778	1L	2SK247
P	2SD814	1M	2SJ84
Q	2SD813	1N	2SK199
R	2SC2480	1O	2SK198
S	2SC2405	1T	2SC3077
T	2SC2406	1X	2SC2845
U	2SC2404	1Z	2SD1030
V	2SC2295	2B	2SK374
W	2SD602	2C	2SK116

(Small Chip Transistor)

Letter	Transistor No.
A	2SB1218
U	2SC3931
W	2SD1820
Y	2SD1819
E3	2SA1226
OS	2SB1219
UC	2SA1532
YU	2SC3938

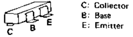
(Pair Transistor)

Letter	Transistor No.
5C	XN4601
5N	XN6501
5O	XN6401

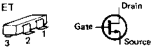
Example : WQ → 2SD602 - Q
YQ → 2SD601 - Q
1BS → 2SB814 - S

Appearance and Symbols

Transistor



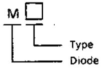
FET



	1	2	3
Except 2SK199	Drain	Source	Gate
2SK199	Gate	Drain	Source

2. Chip Diode

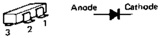
The diode number is indicated on the top surface of the chip diode using Two alphabet letters.



Diode Number

Letter	Diode No.	Letter	Diode No.
MA	MA151A	MI	MA152K
MB	MA152A	MK	MA28W-B
MC	MA153	ML	MA28T-A
MD	MA28-A	MN	MA151WA
ME	MA28-B	MO	MA152WA
MF	MA28W-A	MT	MA151WK
MH	MA151K	MU	MA152WK

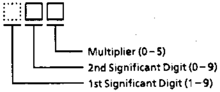
Appearance and Symbols



	1	2	3
MA28/MA28W/MA28T	-	Anode	Cathode
MA151K/MA152K	-	Anode	Cathode
MA151A/MA152A	-	Cathode	Anode
MA151WK/MA152WK	Anode	Anode	Cathode
MA151WA/MA152WA	Cathode	Cathode	Anode
MA153	Cathode	Anode	Common

3. Chip Resistor

The resistor value is indicated on the bottom surface of the chip resistor using three digit numbers.



Example : 330 → 33×10^{0} = 33 ohms
561 → 56×10^{1} = 560 ohms
123 → 12×10^{3} = 12K ohms

Note : Zero ohm resistor (jumper chip) is colored red or green.

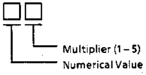
4. Chip Capacitor

The capacitive value of replacement chip capacitors is indicated on the bottom surface. Original parts do not have value indication.

If the capacitive value is less than 100 pF, the value will be indicated by one or two digit number expressing the capacity directly in pF.

Example : 0.5 → 0.5 pF   2.5 → 2.5 pF
.75 → 0.75 pF   33 → 33 pF
1 → 1 pF   82 → 82 pF

If the capacitive value is 100 pF or greater, the value will be indicated by an alpha-numeric code. The letter precedes the number and expresses a numerical value to be multiplied by the number which follows.



Numerical Value

Letter	Value	Letter	Value
A	10	N	33
B	11	P	36
C	12	O	39
D	13	R	43
E	15	S	47
F	16	T	51
G	18	U	56
H	20	V	62
J	22	W	68
K	24	X	75
L	27	Y	82
M	30	Z	91

*Letters I and O are not used

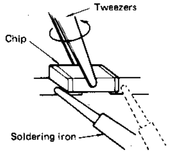
Example : A1 → 10×10^{1} = 100 pF
N2 → 33×10^{2} = 3300 pF
S3 → 47×10^{3} = 47000 pF

5. Precautions in replacing the chip component

1. Make sure that the unit is turned OFF when replacing the chip.
2. Use tweezers to prevent any damage to the chip surface.
3. Do not re-use the chips after removal.
4. Do not rub the electrode of chips.
5. Do not subject the chips to excessive stress.
6. It is recommended that a pencil-type soldering iron to be used.
7. The solder whose diameter is less than 0.5 mm is recommended.
8. Do not heat the chip beyond 3 seconds.
9. Maintain temperature control under 260°C (500°F) when soldering.

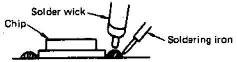
5-1 Removal (Transistor, Diode, Resistor and Capacitor)

1. Add the solder to both ends of the chip (three leads for chip transistor).
2. While attaching the soldering iron to both ends of the chip (three leads for chip transistor) as shown below, remove the chip by turning it with tweezers.
   Note : Be careful not to damage other chips.

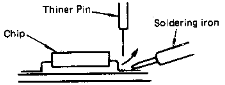


5-2 Removal (IC)

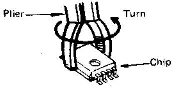
1. Add the solder wick and solder iron to each lead of the IC and remove solder.



2. Add the solder iron to each lead of the IC and left each lead of the IC using thiner pin.

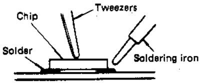


3. Remove IC turning it with plier.

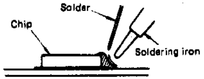


5-3 Mounting

1. Place the solder thinly on the chip mounting foil.
2. Solder the chip temporarily while holding the chip with the tweezers.

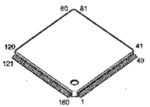


3. Solder both ends of chip (three leads for chip transistor).



IC & TRANSISTORS

YWUPD65082067, YWUPD91361
YWL7A1077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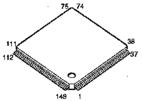
120
121
41
40
160
1

MN5306-LBY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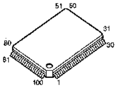
74
111
112
38
37
148
1

YWL7A09646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31
30
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1

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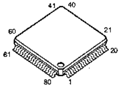
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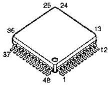
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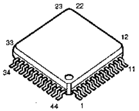
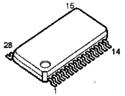
1

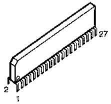
YWUPD65012C25


23
22
33
34
12
11
44
1

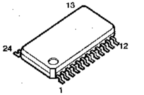
MN676011NPS, MN676012PPS
YWM51271FP



YWM5MC500AL



YWCXD1175AM
YWUPD42102G3



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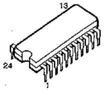
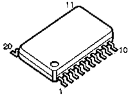
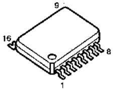


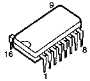
YWMC145407F, MC74HC374AF
YWMC74AC374M



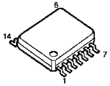
NJU4051BM, NJU4053BM
YWUPD4538BG, MC74HC4053F
MC74HC4051F



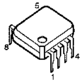
YWM5283P



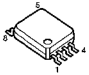
YWNJM3403AM, NJM319M
YWUPC4064G2



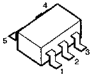
NJM2068MD
YWFA5304P



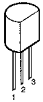
YWM51953AFP, YWM51955AFP
YWLM1881M, YWM5216FP, NJM2904M
YWTC4W53FL, YWNJM2245M
YWNJM2246M, YWNJM2233BM



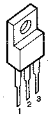
YWSC7S08F, YWSC7SU04F
YWTC7S32F, YWSC7S32F



NJM78L05A, NJM78L06A
YWNJM78L09A, NJM79Lo5A



YWUPC24M12HF
YWUPC2412HF



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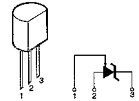
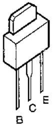
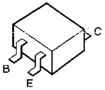


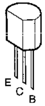
2SA1244-Y



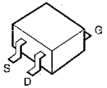
MSB709-QRS, MSD601-QRS, 2SB710-QRS,
2SD1328RS, DTB114EK, 2SD1992A
2SA1733K



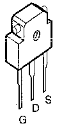
2SA933, 2SC1740
2SC3377



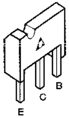
2SK198-PQR



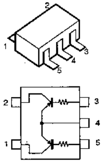
2SK960, 2SK947
2SK897



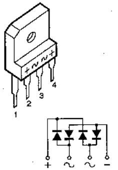
2SB642QRS



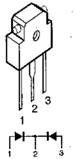
FMA4T149


2
1
5
4
3
2
1
3
4
5

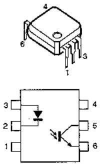
YWRBV406



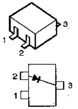
YWESAB85M009
YWESAC82M004



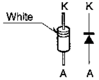
YWPC111LY


4
6
3
1
3
2
1
4
5
6

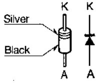
YWDAN212K, MA151K
YWRB421D



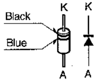
MA165



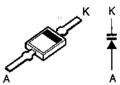
YWERA9102


Silver
Black
K
K
A
A

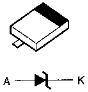
1SS99


Black
Blue
K
K
A
A

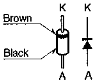
1SV153



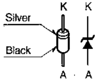
MA8033



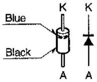
RU1P


Brown
Black
K
K
A
A

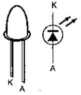
YWEQA0325


Silver
Black
K
K
A
A

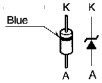
YWERA84009


Blue
Black
K
K
A
A

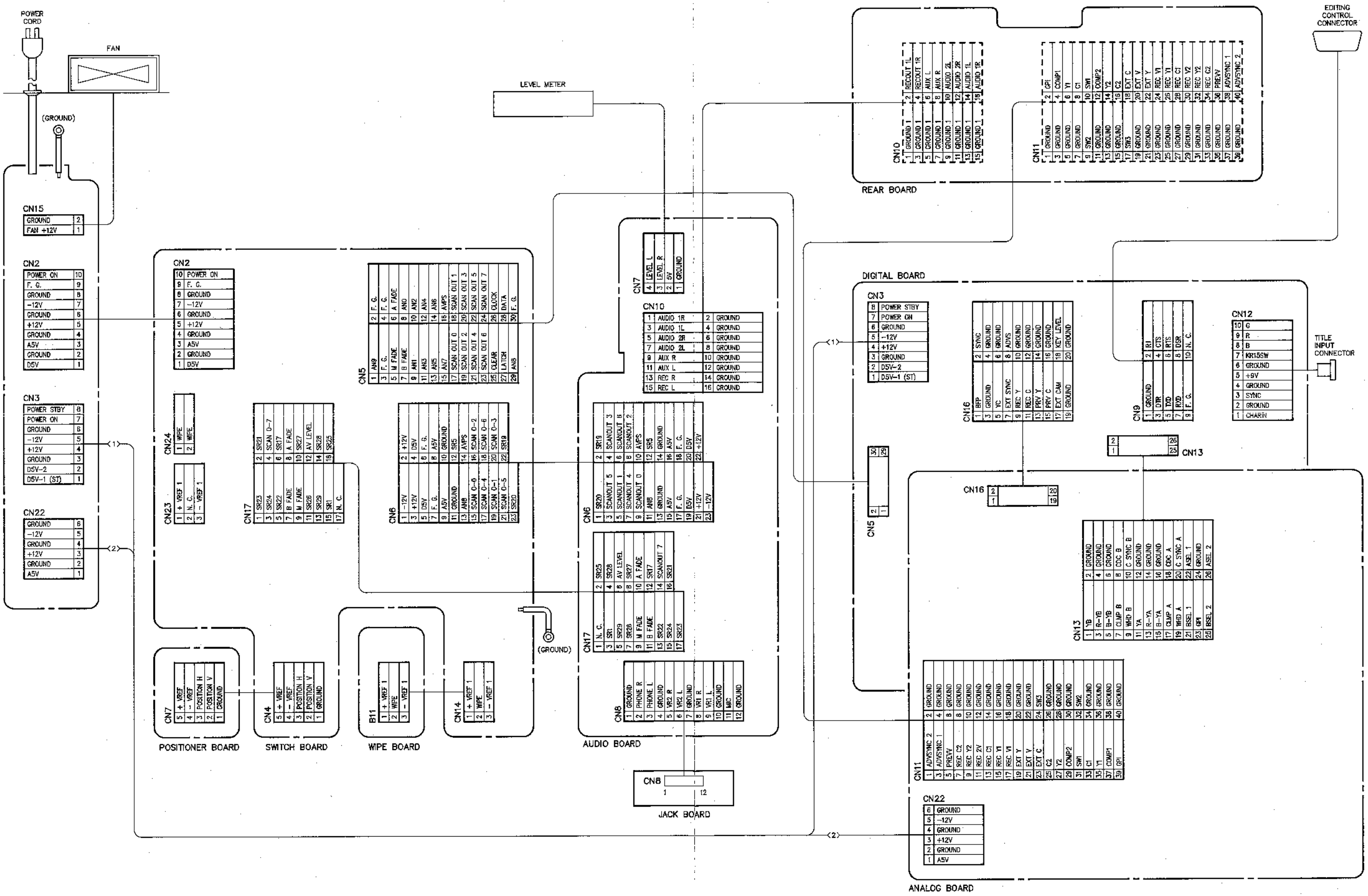
YWSLR34VR90T



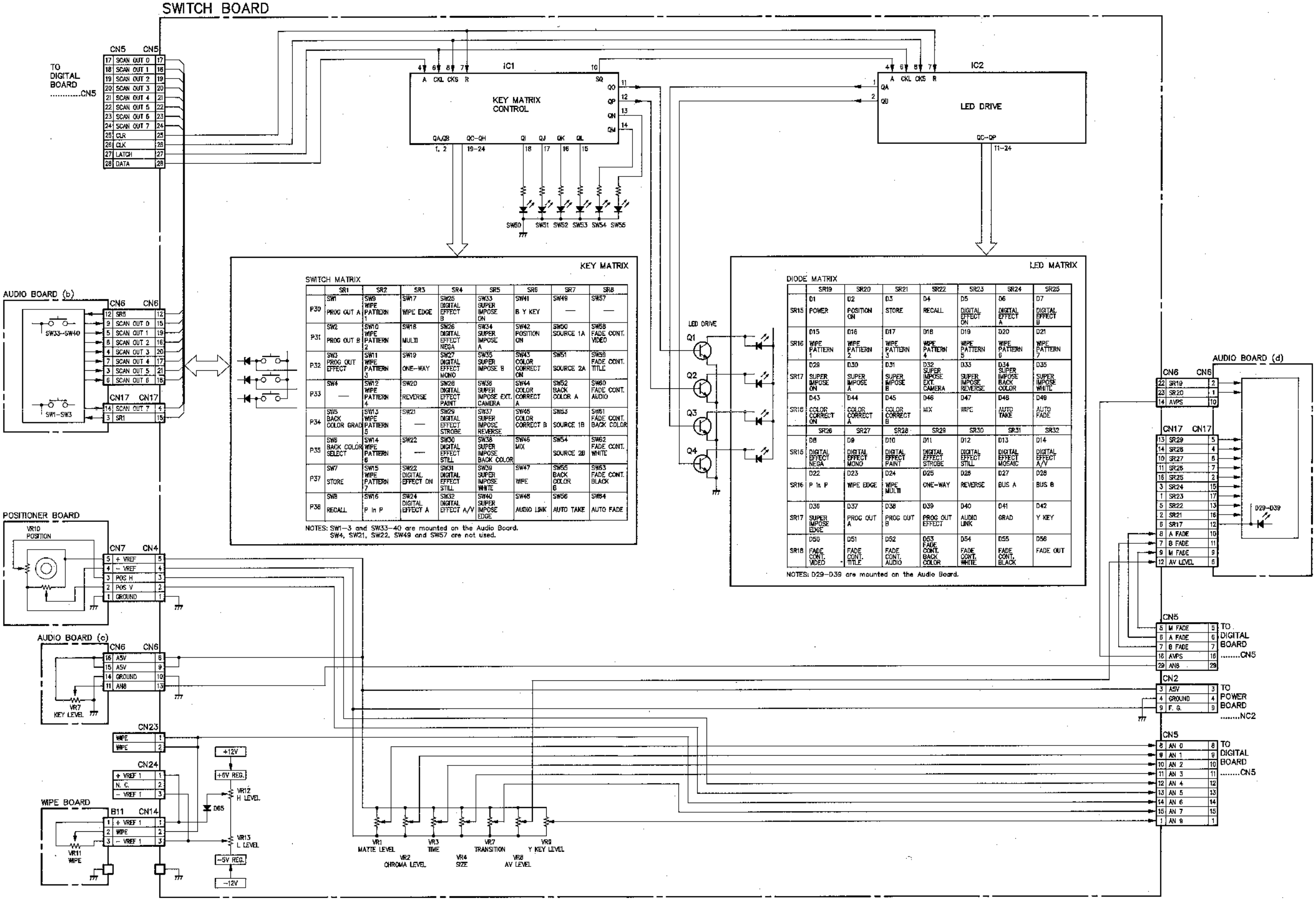
RD5.1JB2



WIRING DIAGRAM


POWER CORD
FAN
(GROUND)
LEVEL METER
EDITING CONTROL CONNECTOR
REAR BOARD
CN10
CN11
CN15
CN2
CN3
CN22
CN24
CN23
CN17
CN5
CN6
CN7
CN14
CN4
B11
CN8
POSITIONER BOARD
SWITCH BOARD
WIPE BOARD
AUDIO BOARD
JACK BOARD
DIGITAL BOARD
CN16
CN9
CN12
TITLE INPUT CONNECTOR
CN13
ANALOG BOARD
(1)
(2)

BLOCK DIAGRAM OF SWITCH BOARD


SWITCH BOARD
TO DIGITAL BOARD CN5
CN5 CN5
17 SCAN OUT 0 17
18 SCAN OUT 1 18
19 SCAN OUT 2 19
20 SCAN OUT 3 20
21 SCAN OUT 4 21
22 SCAN OUT 5 22
23 SCAN OUT 6 23
24 SCAN OUT 7 24
25 CLR 25
26 CLK 26
27 LATCH 27
28 DATA 28
IC1
A CKL CKS R
4 6 8 7
10 SQ
KEY MATRIX CONTROL
QO 11
QP 12
QN 13
QM 14
QA,QB 1, 2
QC–QH 19–24
QI 18
QJ 17
QK 16
QL 15
SW50 SW51 SW52 SW53 SW54 SW55
IC2
A CKL CKS R
4 6 8 7
1 QA
2 QB
LED DRIVE
QC–QP 11–24
KEY MATRIX
LED MATRIX
AUDIO BOARD (b)
SW33–SW40
SW1–SW3
CN6 CN6
12 SR5 12
9 SCAN OUT 0 15
5 SCAN OUT 1 19
8 SCAN OUT 2 16
4 SCAN OUT 3 20
7 SCAN OUT 4 17
3 SCAN OUT 5 21
6 SCAN OUT 6 18
CN17 CN17
14 SCAN OUT 7 4
3 SR1 15
LED DRIVE
Q1
Q2
Q3
Q4
POSITIONER BOARD
VR10 POSITION
CN7 CN4
5 + VREF 5
4 – VREF 4
3 POS H 3
2 POS V 2
1 GROUND 1
AUDIO BOARD (c)
CN6 CN6
16 A5V 8
15 A5V 9
14 GROUND 10
11 AN8 13
VR7 KEY LEVEL
CN23
WIPE 1
WIPE 2
CN24
+ VREF 1 1
N. C. 2
– VREF 1 3
WIPE BOARD
B11 CN14
1 + VREF 1 1
2 WIPE 2
3 – VREF 1 3
VR11 WIPE
+12V
+6V REG.
VR12 H LEVEL
D65
VR13 L LEVEL
–5V REG.
–12V
VR1 MATTE LEVEL
VR2 CHROMA LEVEL
VR3 TIME
VR4 SIZE
VR7 TRANSITION
VR8 AV LEVEL
VR9 Y KEY LEVEL
AUDIO BOARD (d)
CN6 CN6
22 SR19 2
23 SR20 1
14 AVPS 10
CN17 CN17
13 SR29 5
14 SR28 4
10 SR27 6
11 SR26 7
16 SR25 2
3 SR24 15
1 SR23 17
5 SR22 13
2 SR21 16
6 SR17 12
8 A FADE 10
7 B FADE 11
9 M FADE 9
12 AV LEVEL 6
D29–D39
CN5
5 M FADE 5
6 A FADE 6
7 B FADE 7
16 AVPS 16
29 AN8 29
TO DIGITAL BOARD CN5
CN2
3 A5V 3
4 GROUND 4
9 F. G. 9
TO POWER BOARD NC2
CN5
8 AN 0 8
9 AN 1 9
10 AN 2 10
11 AN 3 11
12 AN 4 12
13 AN 5 13
14 AN 6 14
15 AN 7 15
1 AN 9 1
TO DIGITAL BOARD CN5

SWITCH MATRIX

	SR1	SR2	SR3	SR4	SR5	SR6	SR7	SR8
P30	SW1 PROG OUT A	SW9 WIPE PATTERN 1	SW17 WIPE EDGE	SW25 DIGITAL EFFECT B	SW33 SUPER IMPOSE ON	SW41 B Y KEY	SW49 —	SW57 —
P31	SW2 PROG OUT B	SW10 WIPE PATTERN 2	SW18 MULTI	SW26 DIGITAL EFFECT NEGA	SW34 SUPER IMPOSE A	SW42 POSITION ON	SW50 SOURCE 1A	SW58 FADE CONT. VIDEO
P32	SW3 PROG OUT EFFECT	SW11 WIPE PATTERN 3	SW19 ONE–WAY	SW27 DIGITAL EFFECT MONO	SW35 SUPER IMPOSE B	SW43 COLOR CORRECT ON	SW51 SOURCE 2A	SW59 FADE CONT. TITLE
P33	SW4 —	SW12 WIPE PATTERN 4	SW20 REVERSE	SW28 DIGITAL EFFECT PAINT	SW36 SUPER IMPOSE EXT. CAMERA	SW44 COLOR CORRECT A	SW52 BACK COLOR A	SW60 FADE CONT. AUDIO
P34	SW5 BACK COLOR GRAD	SW13 WIPE PATTERN 5	SW21 —	SW29 DIGITAL EFFECT STROBE	SW37 SUPER IMPOSE REVERSE	SW45 COLOR CORRECT B	SW53 SOURCE 1B	SW61 FADE CONT. BACK COLOR
P35	SW6 BACK COLOR SELECT	SW14 WIPE PATTERN 6	SW22 —	SW30 DIGITAL EFFECT STILL	SW38 SUPER IMPOSE BACK COLOR	SW46 MIX	SW54 SOURCE 2B	SW62 FADE CONT. WHITE
P37	SW7 STORE	SW15 WIPE PATTERN 7	SW22 DIGITAL EFFECT ON	SW31 DIGITAL EFFECT STILL	SW39 SUPER IMPOSE WHITE	SW47 WIPE	SW55 BACK COLOR B	SW63 FADE CONT. BLACK
P38	SW8 RECALL	SW16 P In P	SW24 DIGITAL EFFECT A	SW32 DIGITAL EFFECT A/V	SW40 SUPER IMPOSE EDGE	SW48 AUDIO LINK	SW56 AUTO TAKE	SW64 AUTO FADE

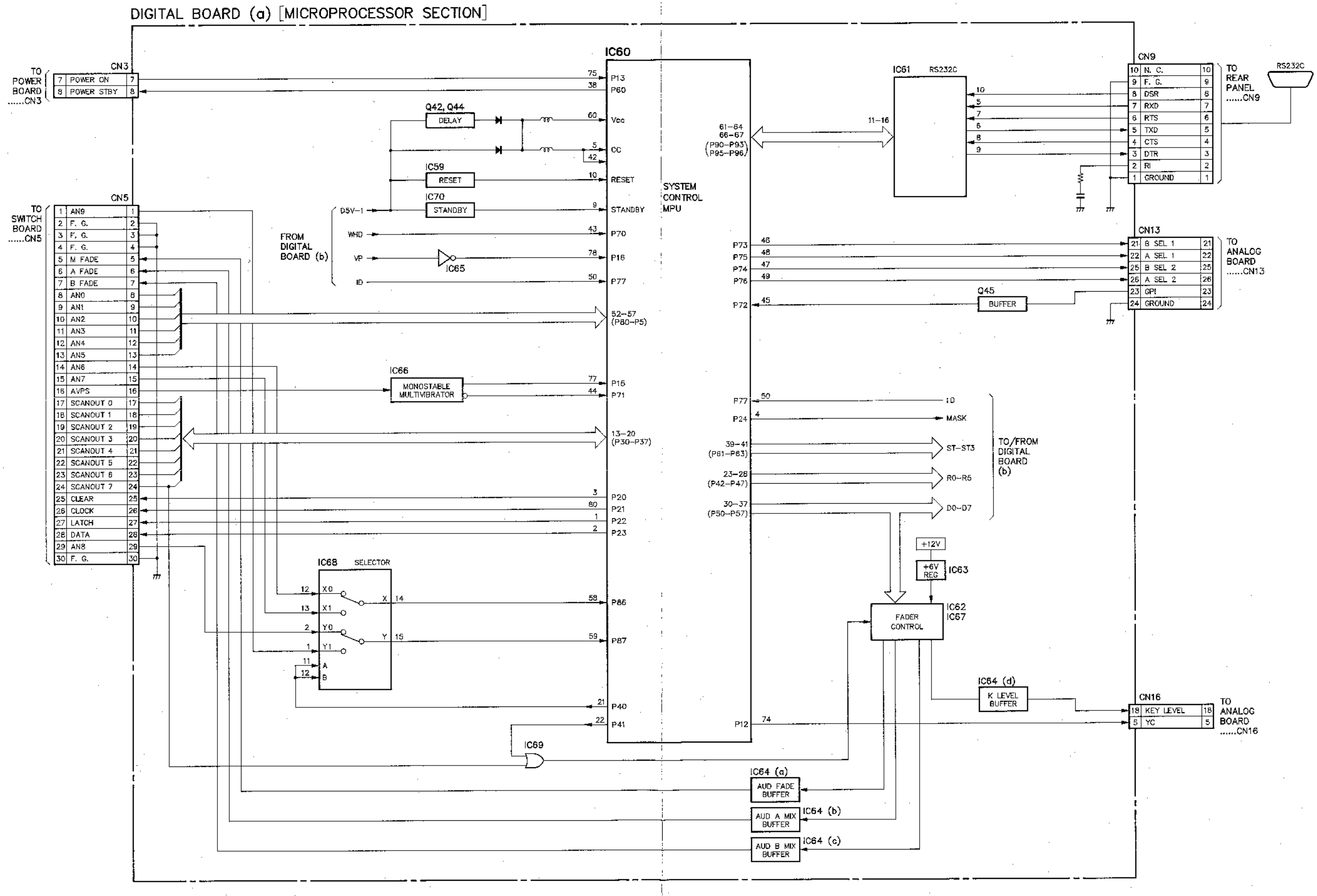
NOTES: SW1–3 and SW33–40 are mounted on the Audio Board.
SW4, SW21, SW22, SW49 and SW57 are not used.

DIODE MATRIX

	SR19	SR20	SR21	SR22	SR23	SR24	SR25
SR15	D1 POWER	D2 POSITION ON	D3 STORE	D4 RECALL	D5 DIGITAL EFFECT ON	D6 DIGITAL EFFECT A	D7 DIGITAL EFFECT B
SR16	D15 WIPE PATTERN 1	D16 WIPE PATTERN 2	D17 WIPE PATTERN 3	D18 WIPE PATTERN 4	D19 WIPE PATTERN 5	D20 WIPE PATTERN 6	D21 WIPE PATTERN 7
SR17	D29 SUPER IMPOSE ON	D30 SUPER IMPOSE A	D31 SUPER IMPOSE B	D32 SUPER IMPOSE EXT. CAMERA	D33 SUPER IMPOSE REVERSE	D34 SUPER IMPOSE BACK COLOR	D35 SUPER IMPOSE WHITE
SR18	D43 COLOR CORRECT ON	D44 COLOR CORRECT A	D45 COLOR CORRECT B	D46 MIX	D47 WIPE	D48 AUTO TAKE	D49 AUTO FADE
	SR26	SR27	SR28	SR29	SR30	SR31	SR32
SR15	D8 DIGITAL EFFECT NEGA	D9 DIGITAL EFFECT MONO	D10 DIGITAL EFFECT PAINT	D11 DIGITAL EFFECT STROBE	D12 DIGITAL EFFECT STILL	D13 DIGITAL EFFECT MOSAIC	D14 DIGITAL EFFECT A/V
SR16	D22 P In P	D23 WIPE EDGE	D24 WIPE MULTI	D25 ONE–WAY	D26 REVERSE	D27 BUS A	D28 BUS B
SR17	D36 SUPER IMPOSE EDGE	D37 PROG OUT A	D38 PROG OUT B	D39 PROG OUT EFFECT	D40 AUDIO LINK	D41 GRAD	D42 Y KEY
SR18	D50 FADE CONT. VIDEO	D51 FADE CONT. TITLE	D52 FADE CONT. AUDIO	D53 FADE CONT. BACK COLOR	D54 FADE CONT. WHITE	D55 FADE CONT. BLACK	D56 FADE OUT

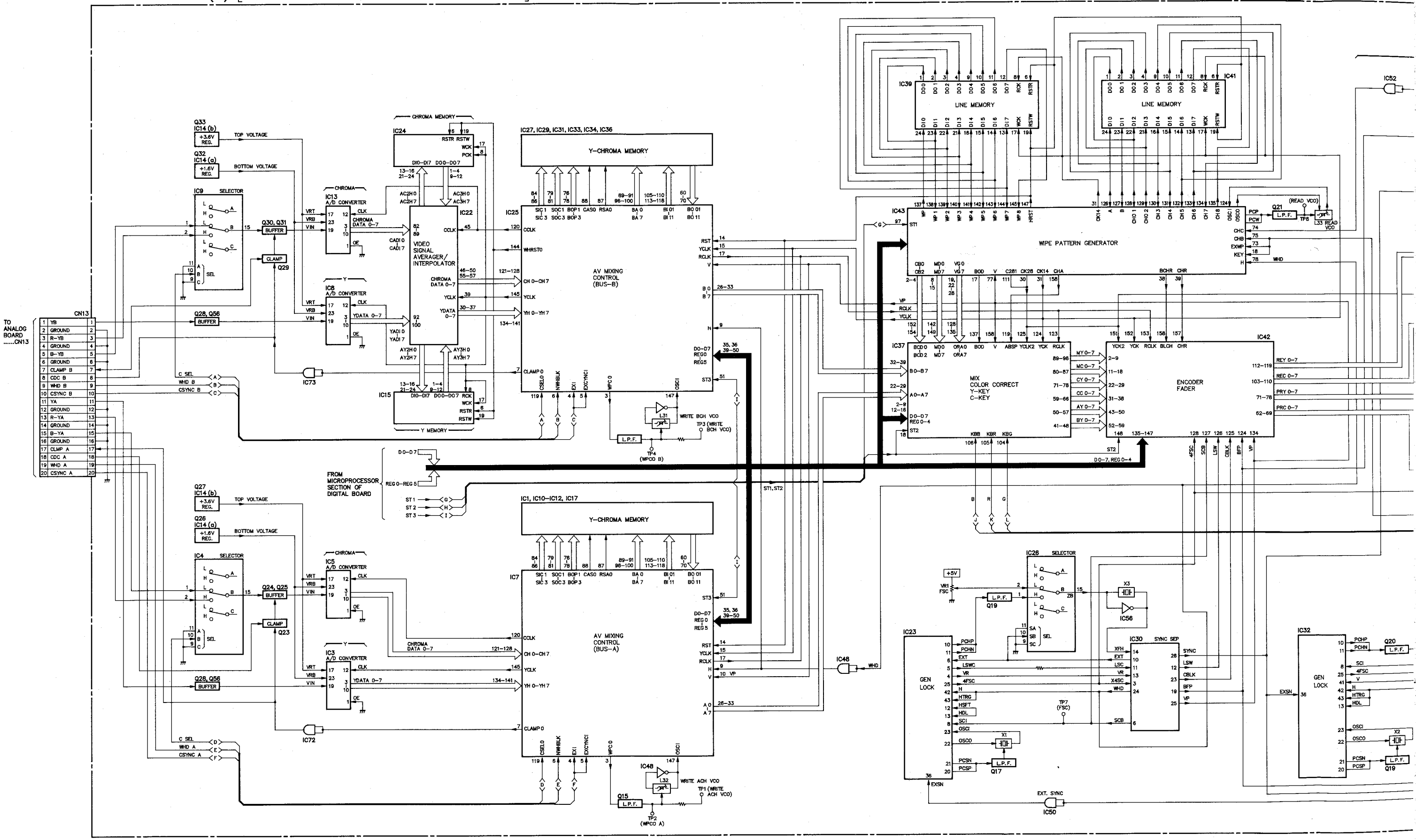
NOTES: D29–D39 are mounted on the Audio Board.

BLOCK DIAGRAM OF DIGITAL BORAD (Microprocessor Section)


DIGITAL BOARD (a) [MICROPROCESSOR SECTION]
TO POWER BOARD CN3
CN3
7 POWER ON 7
8 POWER STBY 8
TO SWITCH BOARD CN5
CN5
1 AN9
2 F. G.
3 F. G.
4 F. G.
5 M FADE
6 A FADE
7 B FADE
8 AN0
9 AN1
10 AN2
11 AN3
12 AN4
13 AN5
14 AN6
15 AN7
16 AVPS
17 SCANOUT 0
18 SCANOUT 1
19 SCANOUT 2
20 SCANOUT 3
21 SCANOUT 4
22 SCANOUT 5
23 SCANOUT 6
24 SCANOUT 7
25 CLEAR
26 CLOCK
27 LATCH
28 DATA
29 AN8
30 F. G.
Q42, Q44
DELAY
IC59
RESET
IC70
STANDBY
FROM DIGITAL BOARD (b)
D5V-1
WHD
VP
ID
IC65
IC66
MONOSTABLE MULTIVIBRATOR
IC68
SELECTOR
X0
X1
Y0
Y1
A
B
X
Y
IC69
IC60
P13
P60
Vcc
CC
RESET
STANDBY
P70
P16
P77
52-57 (P80-P5)
P15
P71
13-20 (P30-P37)
P20
P21
P22
P23
P86
P87
P40
P41
P12
SYSTEM CONTROL MPU
61-64 66-67 (P90-P93) (P95-P96)
P73
P75
P74
P76
P72
P77
P24
39-41 (P61-P63)
23-28 (P42-P47)
30-37 (P50-P57)
IC61
RS232C
11-16
ID
MASK
ST-ST3
R0-R5
D0-D7
TO/FROM DIGITAL BOARD (b)
+12V
+6V REG
IC63
FADER CONTROL
IC62
IC67
IC64 (d)
K LEVEL BUFFER
IC64 (a)
AUD FADE BUFFER
IC64 (b)
AUD A MIX BUFFER
IC64 (c)
AUD B MIX BUFFER
Q45
BUFFER
CN9
10 N. C. 10
9 F. G. 9
8 DSR 8
7 RXD 7
6 RTS 6
5 TXD 5
4 CTS 4
3 DTR 3
2 RI 2
1 GROUND 1
TO REAR PANEL CN9
RS232C
CN13
21 B SEL 1 21
22 A SEL 1 22
25 B SEL 2 25
26 A SEL 2 26
23 GPI 23
24 GROUND 24
TO ANALOG BOARD CN13
CN16
18 KEY LEVEL 18
5 YC 5
TO ANALOG BOARD CN16

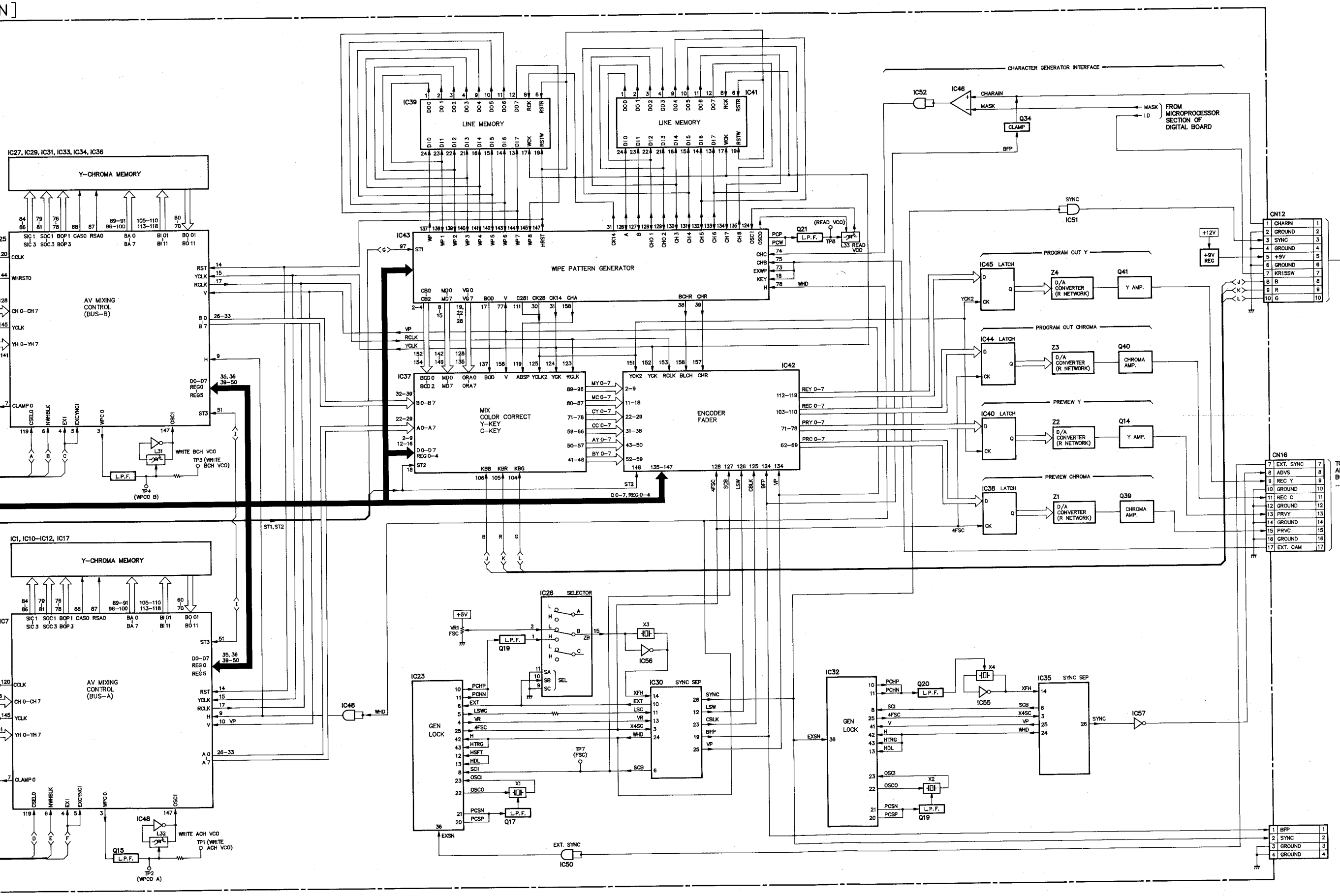
BLOCK DIAGRAM OF DIGITAL BORAD (Digital Signal Processing Section)

DIGITAL BOARD (b) [DIGITAL SIGNAL PROCESSING SECTION]

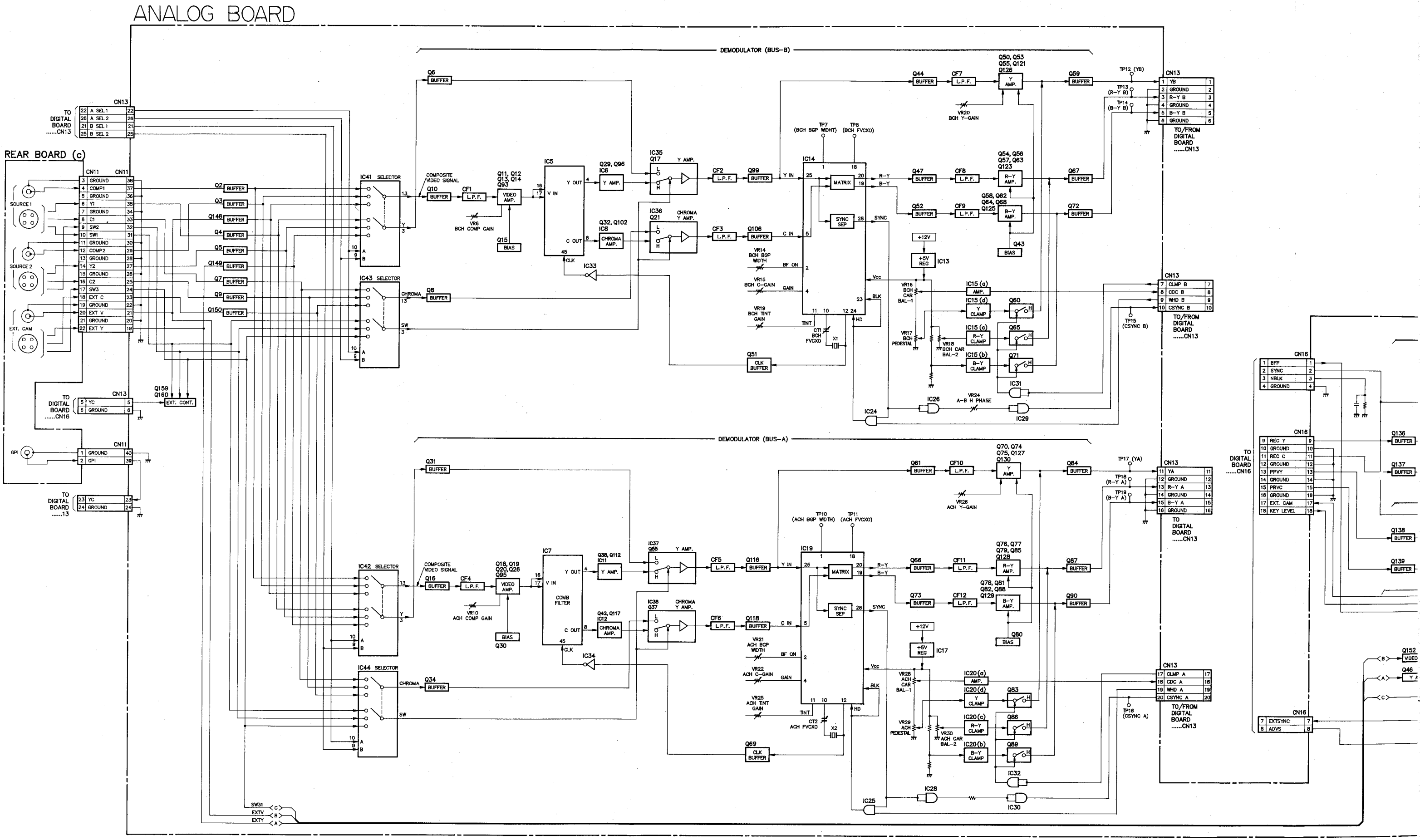

TO ANALOG BOARD CN13
CN13
1 YB
2 GROUND
3 R-YB
4 GROUND
5 B-YB
6 GROUND
7 CLAMP B
8 CDC B
9 WHD B
10 CSYNC B
11 YA
12 GROUND
13 R-YA
14 GROUND
15 B-YA
16 GROUND
17 CLMP A
18 CDC A
19 WHD A
20 CSYNC A
Q33 IC14 (b) +3.6V REG.
TOP VOLTAGE
Q32 IC14 (a) +1.6V REG.
BOTTOM VOLTAGE
IC9 SELECTOR
SEL
Q30, Q31 BUFFER
CLAMP
Q29
Q28, Q56 BUFFER
IC13 A/D CONVERTER
CHROMA
CHROMA DATA 0-7
IC8 A/D CONVERTER
Y
YDATA 0-7
VRT
VRB
VIN
CLK
OE
CHROMA MEMORY
IC24
RSTR RSTW
WCK
PCK
DI0-DI7 DO0-DO7
IC22
VIDEO SIGNAL AVERAGER/ INTERPOLATOR
CCLK
CHROMA DATA 0-7
YCLK
YDATA 0-7
IC15
Y MEMORY
IC73
C SEL
WHD B
CSYNC B
IC27, IC29, IC31, IC33, IC34, IC36
Y-CHROMA MEMORY
IC25
AV MIXING CONTROL (BUS-B)
CCLK
WHRSTO
CH 0-CH 7
YCLK
YH 0-YH 7
CLAMP 0
CSEL0
NWHBLK
EXI
EXCYNCI
WPC 0
OSCI
RST
YCLK
RCLK
DO-D7 REG0 REG5
ST3
L31
WRITE BCH VCO
TP3 (WRITE BCH VCO)
L.P.F.
TP4 (WPCO B)
FROM MICROPROCESSOR SECTION OF DIGITAL BOARD
D0-D7
REG 0-REG 5
ST 1
ST 2
ST 3
ST1, ST2
Q27 IC14 (b) +3.6V REG.
Q26 IC14 (a) +1.6V REG.
IC4 SELECTOR
Q24, Q25 BUFFER
CLAMP
Q23
Q28, Q56 BUFFER
IC5 A/D CONVERTER
IC3 A/D CONVERTER
IC72
C SEL
WHD A
CSYNC A
IC1, IC10-IC12, IC17
Y-CHROMA MEMORY
IC7
AV MIXING CONTROL (BUS-A)
IC48
L32
WRITE ACH VCO
TP1 (WRITE ACH VCO)
Q15 L.P.F.
TP2 (WPCO A)
IC39
LINE MEMORY
IC41
LINE MEMORY
IC43
WIPE PATTERN GENERATOR
Q21 L.P.F.
TP5
L33 READ VCO
(READ VCO)
IC37
MIX COLOR CORRECT Y-KEY C-KEY
IC42
ENCODER FADER
REY 0-7
REC 0-7
PRY 0-7
PRC 0-7
IC52
IC46
WHD
IC26 SELECTOR
+5V
VR1 FSC
L.P.F.
Q19
X3
IC56
IC30 SYNC SEP
SYNC
LSW
CBLK
BFP
VP
IC23
GEN LOCK
X1
L.P.F.
Q17
TP7 (FSC)
EXT. SYNC
IC50
EXSN
IC32
GEN LOCK
Q20 L.P.F.
X2
L.P.F.
Q19

BLOCK DIAGRAM OF DIGITAL BORAD (Digital Signal Processing Section)

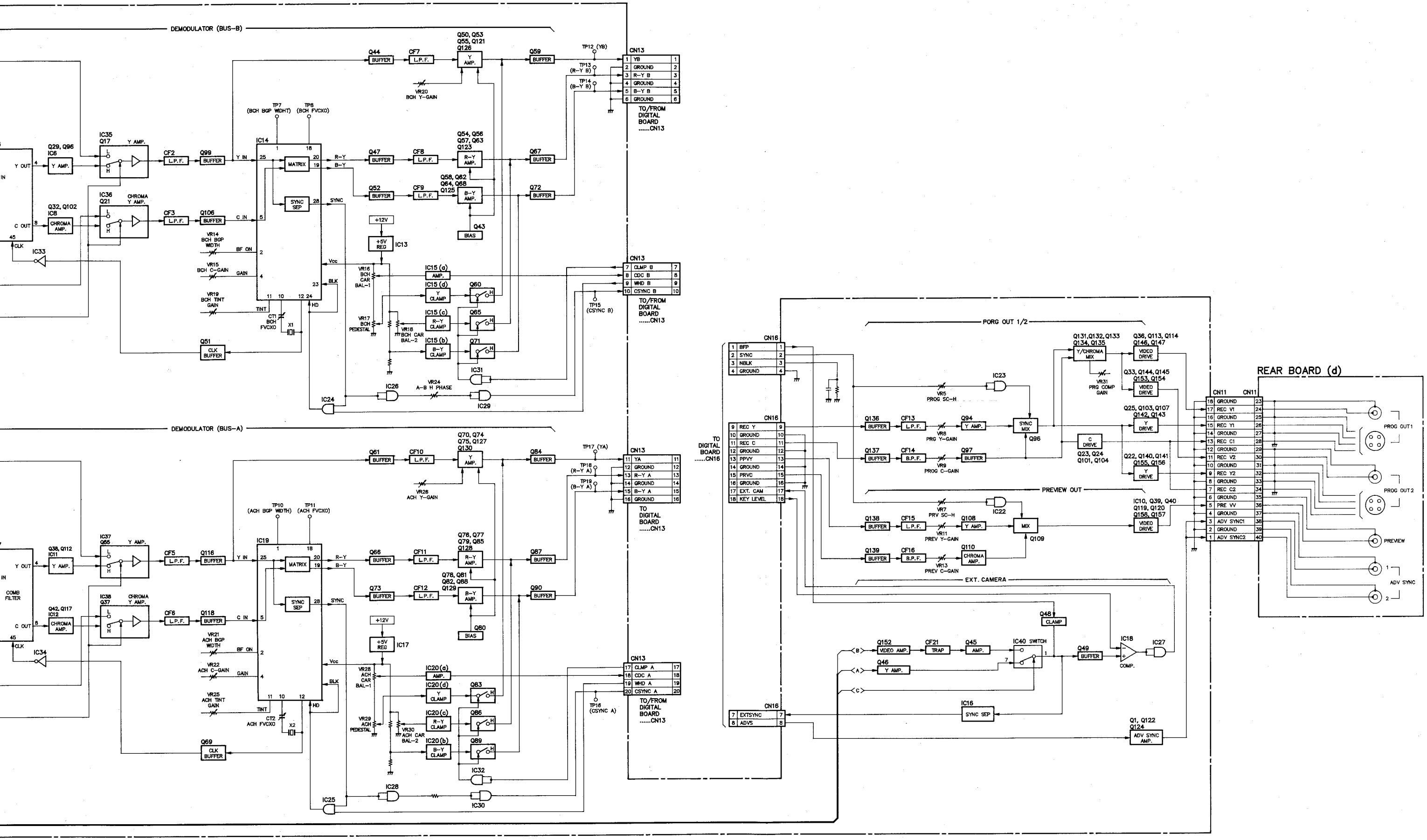
N]


IC39
LINE MEMORY
IC41
LINE MEMORY
IC27, IC29, IC31, IC33, IC34, IC36
Y-CHROMA MEMORY
AV MIXING CONTROL (BUS-B)
IC43
WIPE PATTERN GENERATOR
IC37
MIX COLOR CORRECT Y-KEY C-KEY
IC42
ENCODER FADER
CHARACTER GENERATOR INTERFACE
IC52
IC46
CHARAIN
MASK
Q34
CLAMP
BFP
MASK
ID
FROM MICROPROCESSOR SECTION OF DIGITAL BOARD
SYNC
IC51
Q21
L.P.F.
TP8
(READ VCO)
L33 READ VCO
+12V
+9V REG
CN12
1 CHARIN
2 GROUND
3 SYNC
4 GROUND
5 +9V
6 GROUND
7 KR15SW
8 B
9 R
10 G
TITLER
PROGRAM OUT Y
IC45 LATCH
Z4
D/A CONVERTER (R NETWORK)
Q41
Y AMP.
PROGRAM OUT CHROMA
IC44 LATCH
Z3
D/A CONVERTER (R NETWORK)
Q40
CHROMA AMP.
PREVIEW Y
IC40 LATCH
Z2
D/A CONVERTER (R NETWORK)
Q14
Y AMP.
PREVIEW CHROMA
IC38 LATCH
Z1
D/A CONVERTER (R NETWORK)
Q39
CHROMA AMP.
CN16
7 EXT. SYNC
8 ADVS
9 REC Y
10 GROUND
11 REC C
12 GROUND
13 PRVY
14 GROUND
15 PRVC
16 GROUND
17 EXT. CAM
TO ANALOG BOARD CN16
WRITE BCH VCO
TP3 (WRITE BCH VCO)
L31
L.P.F.
TP4 (WPCO B)
IC1, IC10–IC12, IC17
Y-CHROMA MEMORY
AV MIXING CONTROL (BUS–A)
IC48
WRITE ACH VCO
TP1 (WRITE ACH VCO)
L32
Q15
L.P.F.
TP2 (WPCO A)
IC48
WHD
ST1, ST2
IC26 SELECTOR
+5V
VR1 FSC
L.P.F.
Q19
X3
IC56
IC23
GEN LOCK
X1
L.P.F.
Q17
TP7 (FSC)
IC30 SYNC SEP
IC32
GEN LOCK
Q20
L.P.F.
X4
IC55
IC35 SYNC SEP
IC57
SYNC
X2
L.P.F.
Q19
EXT. SYNC
IC50
EXSN
1 BFP
2 SYNC
3 GROUND
4 GROUND

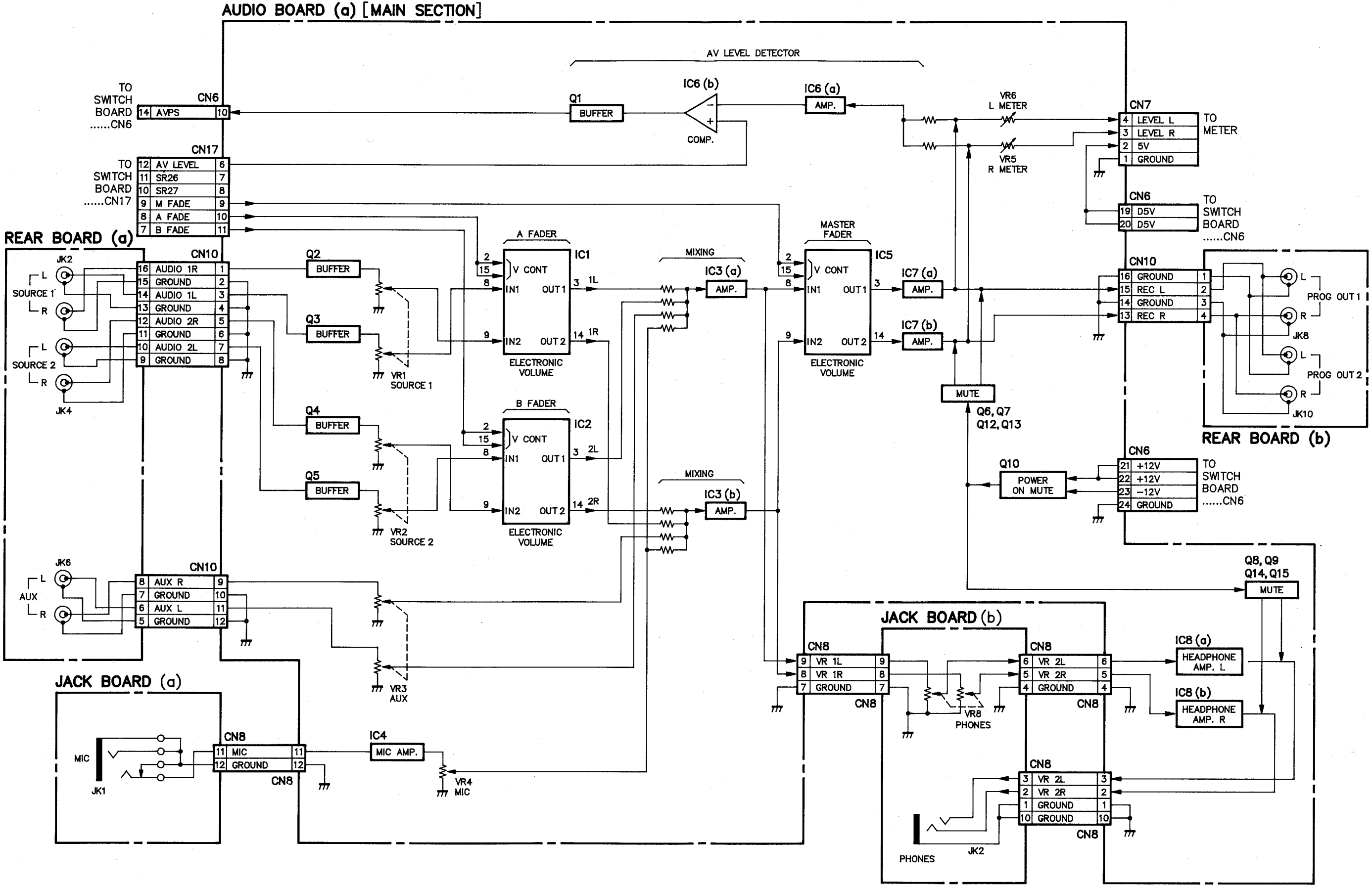
BLOCK DIAGRAM OF ANALOG BOARD


ANALOG BOARD
REAR BOARD (c)
DEMODULATOR (BUS-B)
DEMODULATOR (BUS-A)
SOURCE 1
SOURCE 2
EXT. CAM
GPI
TO DIGITAL BOARD CN13
TO DIGITAL BOARD CN16
TO DIGITAL BOARD 13
TO/FROM DIGITAL BOARD CN13
TO DIGITAL BOARD CN13
CN11
CN13
CN16
A SEL 1
A SEL 2
B SEL 1
B SEL 2
GROUND
COMP1
Y1
C1
SW2
SW1
COMP2
Y2
C2
SW3
EXT C
EXT V
EXT Y
YC
GPI
IC41 SELECTOR
IC43 SELECTOR
IC42 SELECTOR
IC44 SELECTOR
COMPOSITE VIDEO SIGNAL
CHROMA
SW
BUFFER
L.P.F.
VIDEO AMP.
BIAS
Y AMP.
CHROMA AMP.
CHROMA Y AMP.
IC5
IC7
COMB FILTER
Y OUT
C OUT
V IN
CLK
IC33
IC34
IC35
IC36
IC37
IC38
IC14
IC19
MATRIX
SYNC SEP
Y IN
C IN
R-Y
B-Y
SYNC
Vcc
BLK
HD
TINT
BF ON
GAIN
+12V
+5V REG
IC13
IC17
IC15 (a)
IC15 (b)
IC15 (c)
IC15 (d)
IC20 (a)
IC20 (b)
IC20 (c)
IC20 (d)
AMP.
Y CLAMP
R-Y CLAMP
B-Y CLAMP
R-Y AMP.
B-Y AMP.
CLK BUFFER
EXT. CONT.
VR6 BCH COMP GAIN
VR10 ACH COMP GAIN
VR14 BCH BGP WIDTH
VR15 BCH C-GAIN
VR19 BCH TINT GAIN
VR16 BCH CAR BAL-1
VR17 BCH PEDESTAL
VR18 BCH CAR BAL-2
VR20 BCH Y-GAIN
VR24 A-B H PHASE
VR21 ACH BGP WIDTH
VR22 ACH C-GAIN
VR25 ACH TINT GAIN
VR28 ACH CAR BAL-1
VR29 ACH PEDESTAL
VR30 ACH CAR BAL-2
VR26 ACH Y-GAIN
CT1 BCH FVCXO
CT2 ACH FVCXO
X1
X2
TP7 (BCH BGP WIDHT)
TP8 (BCH FVCXO)
TP10 (ACH BGP WIDTH)
TP11 (ACH FVCXO)
TP12 (YB)
TP13 (R-Y B)
TP14 (B-Y B)
TP15 (CSYNC B)
TP16 (CSYNC A)
TP17 (YA)
TP18 (R-Y A)
TP19 (B-Y A)
YB
R-Y B
B-Y B
CLMP B
CDC B
WHD B
CSYNC B
YA
R-Y A
B-Y A
CLMP A
CDC A
WHD A
CSYNC A
BFP
NBLK
REC Y
REC C
PPVY
PRVC
EXT. CAM
KEY LEVEL
EXTSYNC
ADVS
SW31
EXTV
EXTY
IC24
IC25
IC26
IC28
IC29
IC30
IC31
IC32
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11, Q12 Q13, Q14 Q93
Q15
Q16
Q18, Q19 Q20, Q26 Q95
Q29, Q96 IC6
Q30
Q31
Q32, Q102 IC8
Q34
Q38, Q112 IC11
Q42, Q117 IC12
Q43
Q44
Q47
Q50, Q53 Q55, Q121 Q126
Q51
Q52
Q54, Q56 Q57, Q63 Q123
Q58, Q62 Q64, Q68 Q125
Q59
Q60
Q61
Q65
Q66
Q67
Q69
Q70, Q74 Q75, Q127 Q130
Q71
Q72
Q73
Q76, Q77 Q79, Q85 Q128
Q78, Q81 Q82, Q88 Q129
Q80
Q83
Q84
Q86
Q87
Q89
Q90
Q99
Q106
Q116
Q118
Q136
Q137
Q138
Q139
Q148
Q149
Q150
Q152
Q46
Q159 Q160
CF1
CF2
CF3
CF4
CF5
CF6
CF7
CF8
CF9
CF10
CF11
CF12

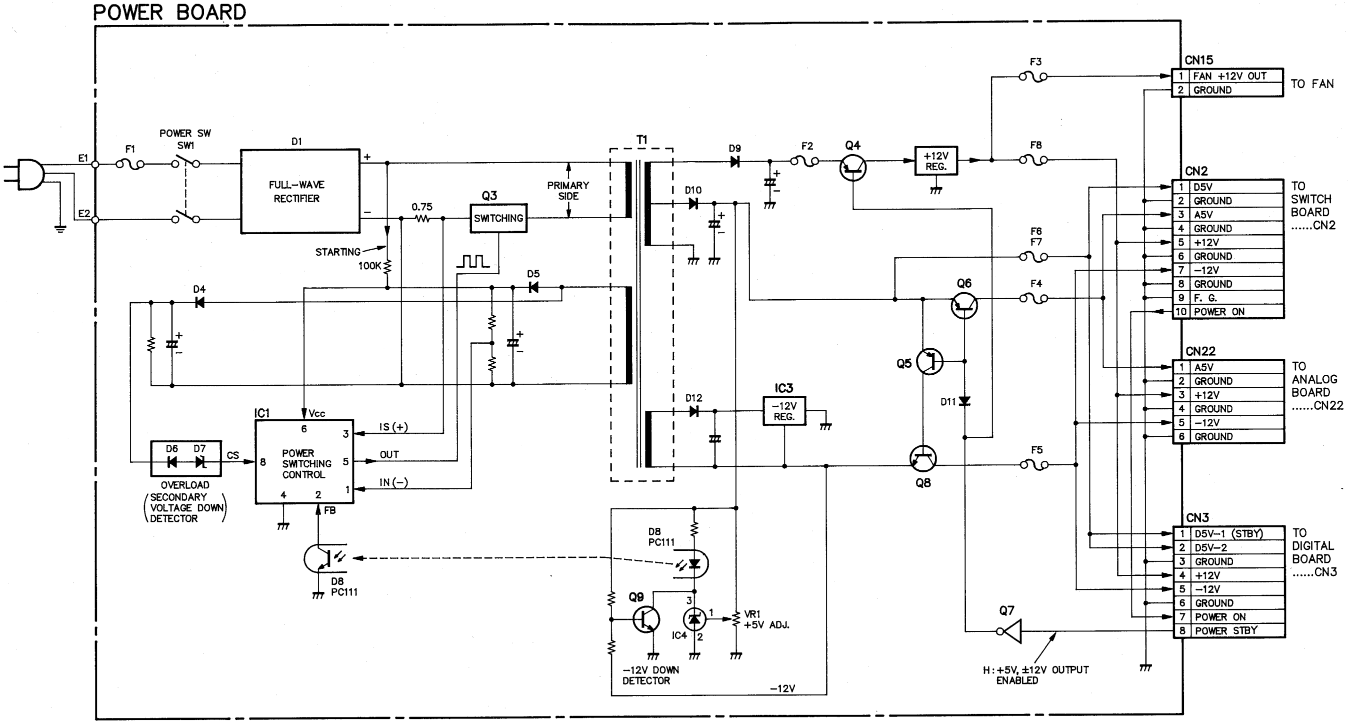
BLOCK DIAGRAM OF ANALOG BOARD


DEMODULATOR (BUS-B)
DEMODULATOR (BUS-A)
Y OUT
C OUT
IN
COMB FILTER
CLK
Q29, Q96 IC6 Y AMP.
Q32, Q102 IC8 CHROMA AMP.
IC35 Q17 Y AMP.
IC36 Q21 CHROMA Y AMP.
IC33
CF2 L.P.F.
CF3 L.P.F.
Q99 BUFFER
Q106 BUFFER
Y IN
C IN
BF ON
GAIN
TINT
VR14 BCH BGP WIDTH
VR15 BCH C-GAIN
VR19 BCH TINT GAIN
CT1 BCH FVCXO
X1
TP7 (BCH BGP WIDHT)
TP8 (BCH FVCXO)
IC14
MATRIX
SYNC SEP
R-Y
B-Y
SYNC
Vcc
BLK
HD
Q51 CLK BUFFER
Q44 BUFFER
CF7 L.P.F.
Q50, Q53 Q55, Q121 Q126 Y AMP.
VR20 BCH Y-GAIN
Q59 BUFFER
TP12 (YB)
TP13 (R-Y B)
TP14 (B-Y B)
CN13
YB
GROUND
R-Y B
B-Y B
TO/FROM DIGITAL BOARD CN13
Q47 BUFFER
CF8 L.P.F.
Q54, Q56 Q57, Q63 Q123 R-Y AMP.
Q67 BUFFER
Q52 BUFFER
CF9 L.P.F.
Q58, Q62 Q64, Q68 Q125 B-Y AMP.
Q72 BUFFER
Q43 BIAS
+12V
+5V REG IC13
VR16 BCH CAR BAL-1
VR17 BCH PEDESTAL
VR18 BCH CAR BAL-2
IC15 (a) AMP.
IC15 (d) Y CLAMP
IC15 (c) R-Y CLAMP
IC15 (b) B-Y CLAMP
Q60
Q65
Q71
IC31
IC26
IC29
IC24
VR24 A-B H PHASE
CLMP B
CDC B
WHD B
CSYNC B
TP15 (CSYNC B)
Q38, Q112 IC11 Y AMP.
Q42, Q117 IC12 CHROMA AMP.
IC37 Q55 Y AMP.
IC38 Q37 CHROMA Y AMP.
IC34
CF5 L.P.F.
CF6 L.P.F.
Q116 BUFFER
Q118 BUFFER
VR21 ACH BGP WIDTH
VR22 ACH C-GAIN
VR25 ACH TINT GAIN
CT2 ACH FVCXO
X2
TP10 (ACH BGP WIDTH)
TP11 (ACH FVCXO)
IC19
Q69 CLK BUFFER
Q61 BUFFER
CF10 L.P.F.
Q70, Q74 Q75, Q127 Q130 Y AMP.
VR26 ACH Y-GAIN
Q84 BUFFER
TP17 (YA)
TP18 (R-Y A)
TP19 (B-Y A)
YA
R-Y A
B-Y A
TO DIGITAL BOARD CN13
Q66 BUFFER
CF11 L.P.F.
Q76, Q77 Q79, Q85 Q128 R-Y AMP.
Q87 BUFFER
Q73 BUFFER
CF12 L.P.F.
Q78, Q81 Q82, Q88 Q129 B-Y AMP.
Q90 BUFFER
Q80 BIAS
+5V REG IC17
VR28 ACH CAR BAL-1
VR29 ACH PEDESTAL
VR30 ACH CAR BAL-2
IC20 (a) AMP.
IC20 (d) Y CLAMP
IC20 (c) R-Y CLAMP
IC20 (b) B-Y CLAMP
Q83
Q86
Q89
IC32
IC28
IC30
IC25
CLMP A
CDC A
WHD A
CSYNC A
TP16 (CSYNC A)
TO DIGITAL BOARD CN16
CN16
BFP
SYNC
NBLK
GROUND
REC Y
REC C
PPVY
PRVC
EXT. CAM
KEY LEVEL
EXTSYNC
ADVS
PORG OUT 1/2
IC23
VR5 PROG SC-H
Q136 BUFFER
CF13 L.P.F.
VR8 PRG Y-GAIN
Q94 Y AMP.
SYNC MIX
Q96
Q137 BUFFER
CF14 B.P.F.
VR9 PROG C-GAIN
Q97 BUFFER
Q131,Q132,Q133 Q134, Q135 Y/CHROMA MIX
VR31 PRG COMP GAIN
Q36, Q113, Q114 Q146, Q147 VIDEO DRIVE
Q33, Q144, Q145 Q153, Q154 VIDEO DRIVE
Q25, Q103, Q107 Q142, Q143 Y DRIVE
C DRIVE
Q23, Q24 Q101, Q104
Q22, Q140, Q141 Q155, Q156 Y DRIVE
PREVIEW OUT
VR7 PRV SC-H
IC22
Q138 BUFFER
CF15 L.P.F.
VR11 PREV Y-GAIN
Q108 Y AMP.
MIX
Q109
IC10, Q39, Q40 Q119, Q120 Q158, Q157 VIDEO DRIVE
Q139 BUFFER
CF16 B.P.F.
VR13 PREV C-GAIN
Q110 CHROMA AMP.
EXT. CAMERA
Q48 CLAMP
Q152 VIDEO AMP.
CF21 TRAP
Q45 AMP.
IC40 SWITCH
Q46 Y AMP.
Q49 BUFFER
IC18 COMP.
IC27
IC16 SYNC SEP
Q1, Q122 Q124 ADV SYNC AMP.
REAR BOARD (d)
CN11
REC V1
REC Y1
REC C1
REC V2
REC Y2
REC C2
PRE VV
ADV SYNC1
ADV SYNC2
PROG OUT1
PROG OUT2
PREVIEW
ADV SYNC

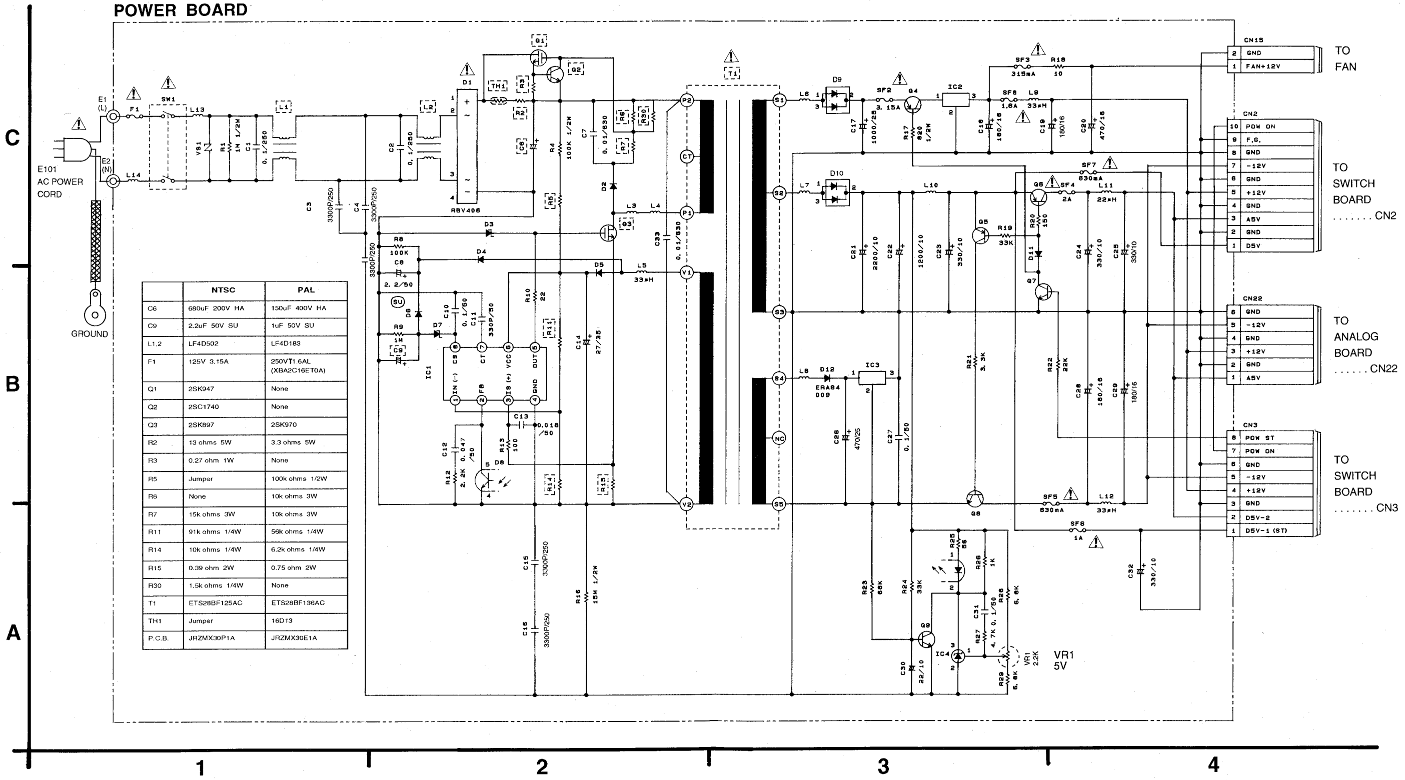
BLOCK DIAGRAM OF AUDIO BOARD


AUDIO BOARD (a) [MAIN SECTION]
AV LEVEL DETECTOR
TO SWITCH BOARD CN6
CN6
14 AVPS 10
Q1
BUFFER
IC6 (b)
COMP.
IC6 (a)
AMP.
VR6 L METER
VR5 R METER
CN7
4 LEVEL L
3 LEVEL R
2 5V
1 GROUND
TO METER
CN17
TO SWITCH BOARD CN17
12 AV LEVEL 6
11 SR26 7
10 SR27 8
9 M FADE 9
8 A FADE 10
7 B FADE 11
CN6
19 D5V
20 D5V
TO SWITCH BOARD CN6
REAR BOARD (a)
JK2
SOURCE 1 L R
SOURCE 2 L R
JK4
CN10
16 AUDIO 1R 1
15 GROUND 2
14 AUDIO 1L 3
13 GROUND 4
12 AUDIO 2R 5
11 GROUND 6
10 AUDIO 2L 7
9 GROUND 8
Q2 BUFFER
Q3 BUFFER
VR1 SOURCE 1
Q4 BUFFER
Q5 BUFFER
VR2 SOURCE 2
A FADER
IC1
2 15 V CONT
8 IN1 OUT1 3 1L
9 IN2 OUT2 14 1R
ELECTRONIC VOLUME
B FADER
IC2
2 15 V CONT
8 IN1 OUT1 3 2L
9 IN2 OUT2 14 2R
ELECTRONIC VOLUME
MIXING
IC3 (a) AMP.
MIXING
IC3 (b) AMP.
MASTER FADER
IC5
2 15 V CONT
8 IN1 OUT1 3
9 IN2 OUT2 14
ELECTRONIC VOLUME
IC7 (a) AMP.
IC7 (b) AMP.
MUTE
Q6, Q7 Q12, Q13
CN10
16 GROUND 1
15 REC L 2
14 GROUND 3
13 REC R 4
PROG OUT 1 L R
JK8
PROG OUT 2 L R
JK10
REAR BOARD (b)
CN6
21 +12V
22 +12V
23 −12V
24 GROUND
TO SWITCH BOARD CN6
Q10
POWER ON MUTE
JK6
AUX L R
CN10
8 AUX R 9
7 GROUND 10
6 AUX L 11
5 GROUND 12
VR3 AUX
Q8, Q9 Q14, Q15
MUTE
JACK BOARD (a)
MIC
JK1
CN8
11 MIC 11
12 GROUND 12
CN8
IC4
MIC AMP.
VR4 MIC
JACK BOARD (b)
CN8
9 VR 1L 9
8 VR 1R 8
7 GROUND 7
CN8
VR8 PHONES
CN8
6 VR 2L 6
5 VR 2R 5
4 GROUND 4
CN8
IC8 (a) HEADPHONE AMP. L
IC8 (b) HEADPHONE AMP. R
CN8
3 VR 2L 3
2 VR 2R 2
1 GROUND 1
10 GROUND 10
CN8
PHONES
JK2

BLOCK DIAGRAM OF POWER BOARD


POWER BOARD
E1
E2
F1
POWER SW
SW1
D1
FULL-WAVE
RECTIFIER
+
−
0.75
Q3
SWITCHING
PRIMARY
SIDE
STARTING
100K
D4
D5
T1
IC1
Vcc
6
3
5
1
8
4
2
POWER
SWITCHING
CONTROL
IS (+)
OUT
IN (−)
CS
FB
D6
D7
OVERLOAD
SECONDARY
VOLTAGE DOWN
DETECTOR
D8
PC111
D9
D10
D12
F2
Q4
+12V
REG.
IC3
−12V
REG.
F3
F8
F6
F7
F4
F5
Q5
Q6
Q7
Q8
Q9
D11
IC4
VR1
+5V ADJ.
−12V DOWN
DETECTOR
−12V
H: +5V, ±12V OUTPUT
ENABLED
CN15
1 FAN +12V OUT
2 GROUND
TO FAN
CN2
1 D5V
2 GROUND
3 A5V
4 GROUND
5 +12V
6 GROUND
7 −12V
8 GROUND
9 F. G.
10 POWER ON
TO
SWITCH
BOARD
......CN2
CN22
1 A5V
2 GROUND
3 +12V
4 GROUND
5 −12V
6 GROUND
TO
ANALOG
BOARD
......CN22
CN3
1 D5V−1 (STBY)
2 D5V−2
3 GROUND
4 +12V
5 −12V
6 GROUND
7 POWER ON
8 POWER STBY
TO
DIGITAL
BOARD
......CN3

SCHEMATIC DIAGRAM OF POWER BOARD


POWER BOARD
E101
AC POWER
CORD
GROUND
E1 (L)
E2 (N)
F1
SW1
L13
L14
VS1
R1 1M 1/2W
C1 0.1/250
L1
L2
C2 0.1/250
C3 3300P/250
C4 3300P/250
D1 RBV406
TH1
R2
R3
Q1
Q2
Q3
C6
R4 100K 1/2W
R5
C7 0.01/630
R6
R30
R7
D2
D3
D4
D5
L3
L4
L5 33μH
C33 0.01/630
R8 100K
C8 2.2/50
SU
D6
R9 1M
C9
D7
C10 0.1/50
C11 330P/50
R10 22
R11
C14 27/35
IC1
IN (-)
FB
IS (+)
GND
CS
CT
VCC
OUT
C13 0.018/50
C12 0.047/50
R12 2.2K
R13 100
D8
R14
R15
C15 3300P/250
C16 3300P/250
R16 15M 1/2W
T1
P2
CT
P1
V1
V2
S1
S2
S3
S4
NC
S5
D9
L6
SF2 3.15A
Q4
C17 1000/25
R17 820 1/2W
IC2
SF3 315mA
R18 10
SF8 1.6A
L9 33μH
C18 180/16
C19 180/16
C20 470/16
D10
L7
L10
SF7 630mA
Q6
SF4 2A
L11 22μH
C21 2200/10
C22
1200/10
C23 330/10
Q5
R19 33K
R20 150
D11
C24 330/10
C25 330/10
Q7
L8
D12 ERA84 009
IC3
R21 3.3K
R22 22K
C28 470/25
C27 0.1/50
C26 180/16
C29 180/16
Q8
SF5 630mA
L12 33μH
SF6 1A
C32 330/10
R23 68K
R24 33K
R25 56
R26 1K
R28 6.8K
C31 0.1/50
R27 4.7K
Q9
IC4
VR1 2.2K
VR1
5V
C30 22/10
R29 6.8K
CN15
GND
FAN+12V
TO
FAN
CN2
POW ON
F.G.
GND
-12V
+12V
A5V
D5V
TO
SWITCH
BOARD
.... CN2
CN22
TO
ANALOG
BOARD
...... CN22
CN3
POW ST
D5V-2
D5V-1 (ST)
TO
SWITCH
BOARD
.... CN3
C
B
A
1
2
3
4

	NTSC	PAL
C6	680uF 200V HA	150uF 400V HA
C9	2.2uF 50V SU	1uF 50V SU
L1,2	LF4D502	LF4D183
F1	125V 3.15A	250VT1.6AL (XBA2C16ET0A)
Q1	2SK947	None
Q2	2SC1740	None
Q3	2SK897	2SK970
R2	13 ohms 5W	3.3 ohms 5W
R3	0.27 ohm 1W	None
R5	Jumper	100k ohms 1/2W
R6	None	10k ohms 3W
R7	15k ohms 3W	10k ohms 3W
R11	91k ohms 1/4W	56k ohms 1/4W
R14	10k ohms 1/4W	6.2k ohms 1/4W
R15	0.39 ohm 2W	0.75 ohm 2W
R30	1.5k ohms 1/4W	None
T1	ETS28BF125AC	ETS28BF136AC
TH1	Jumper	16D13
P.C.B.	JRZMX30P1A	JRZMX30E1A

PRODUCT SAFETY NOTICE

COMPONENT IDENTIFIED WITH THE "⚠" MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN SERVICING ANY OF THESE COMPONENTS, IT IS ESSENTIAL THAT ONLY MANUFACTURE"S SPECIFIED PARTS BE USED.

POWER BOARD

	IC1	IC2	IC3	IC4
Pin 1	1.4	15.8	3.9	2.4
2	1.6	0	-12.0	-16.0
3	0	12.0	0	4.2
4	0			
5	1.7			
6	2.0			
7	1.4			
8	1.6			

	B	C	E
Q3	(G)5.0	(D)-13.4	(S)0
4	15.1	15.8	15.8
5	4.5	5.1	5.2
6	4.5	5.1	5.2
7	0.7	0.4	-12.4
8	-11.3	-12.0	-12.0
9	-0.5	4.2	0

<Index>

Power Board

IC1	B2	Q3	C2	Q7	B3	D2	C2	D6	B2	D10	C3
IC2	C3	Q4	C3	Q8	A3	D3	C2	D7	B2	D11	C3
IC3	B3	Q5	C3	Q9	A3	D4	C2	D8	A3/B2	D12	B3
IC4	A3	Q6	C3	D1	C2	D5	B2	D9	C3	SW1	C1

CONDUCTOR VIEW OF POWER BOARD

POWER BOARD

TO
FAN

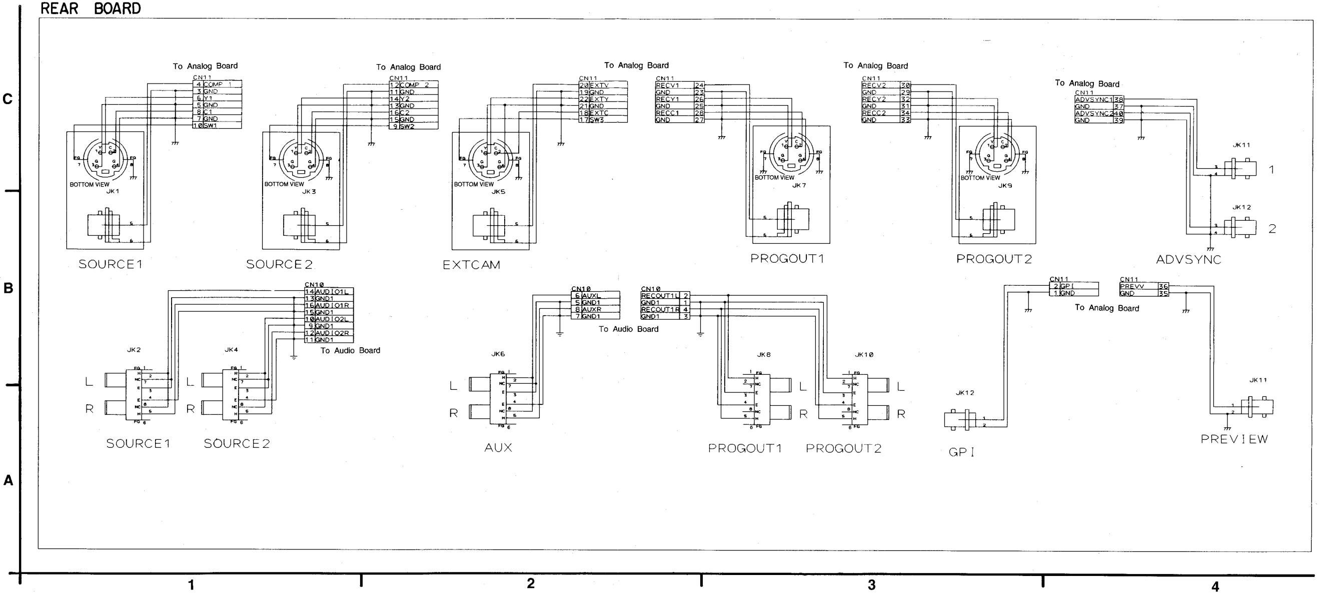
TO
SWITCH
BOARD
.... CN2

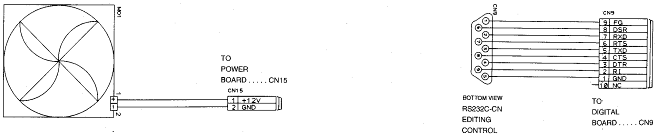
TO
ANALOG
BOARD
...... CN22

TO
SWITCH
BOARD
.... CN3

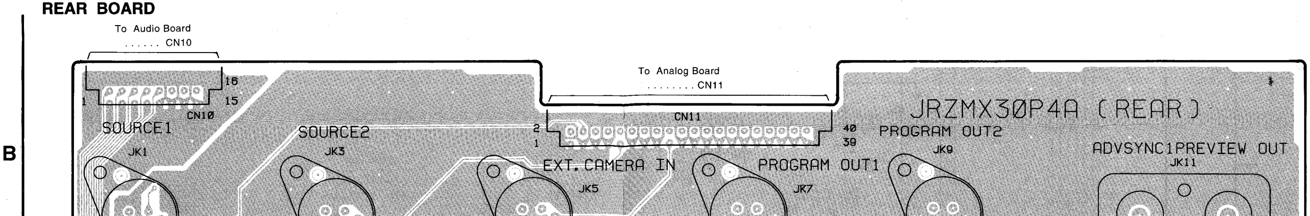
C	E
)-13.4	(S)0
15.8	15.8
5.1	5.2
5.1	5.2
0.4	-12.4
12.0	-12.0
4.2	0

SCHEMATIC DIAGRAM OF REAR BOARD

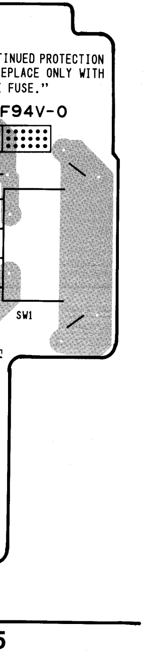

REAR BOARD
C
B
A
1
2
3
4
To Analog Board
CN11
4 COMP 1
3 GND
6 Y1
5 GND
8 C1
7 GND
10 SW1
BOTTOM VIEW
JK1
SOURCE1
To Analog Board
CN11
12 COMP 2
11 GND
14 Y2
13 GND
16 C2
15 GND
9 SW2
BOTTOM VIEW
JK3
SOURCE2
To Analog Board
CN11
20 EXTV
19 GND
22 EXTY
21 GND
18 EXTC
17 SW3
BOTTOM VIEW
JK5
EXTCAM
CN11
RECV1 24
GND 23
RECY1 26
GND 25
RECC1 28
GND 27
BOTTOM VIEW
JK7
PROGOUT1
To Analog Board
CN11
RECV2 30
GND 29
RECY2 32
GND 31
RECC2 34
GND 33
BOTTOM VIEW
JK9
PROGOUT2
To Analog Board
CN11
ADVSYNC1 38
GND 37
ADVSYNC2 40
GND 39
JK11
1
JK12
2
ADVSYNC
CN10
14 AUD IO1L
13 GND1
16 AUD IO1R
15 GND1
10 AUD IO2L
9 GND1
12 AUD IO2R
11 GND1
To Audio Board
JK2
JK4
L
R
SOURCE1
SOURCE2
CN10
6 AUXL
5 GND1
8 AUXR
7 GND1
To Audio Board
JK6
L
R
AUX
CN10
RECOUT1L 2
GND1 1
RECOUT1R 4
GND1 3
JK8
JK10
PROGOUT1
PROGOUT2
CN11
2 GPI
1 GND
CN11
PREVV 36
GND 35
To Analog Board
JK12
GPI
JK11
PREVIEW

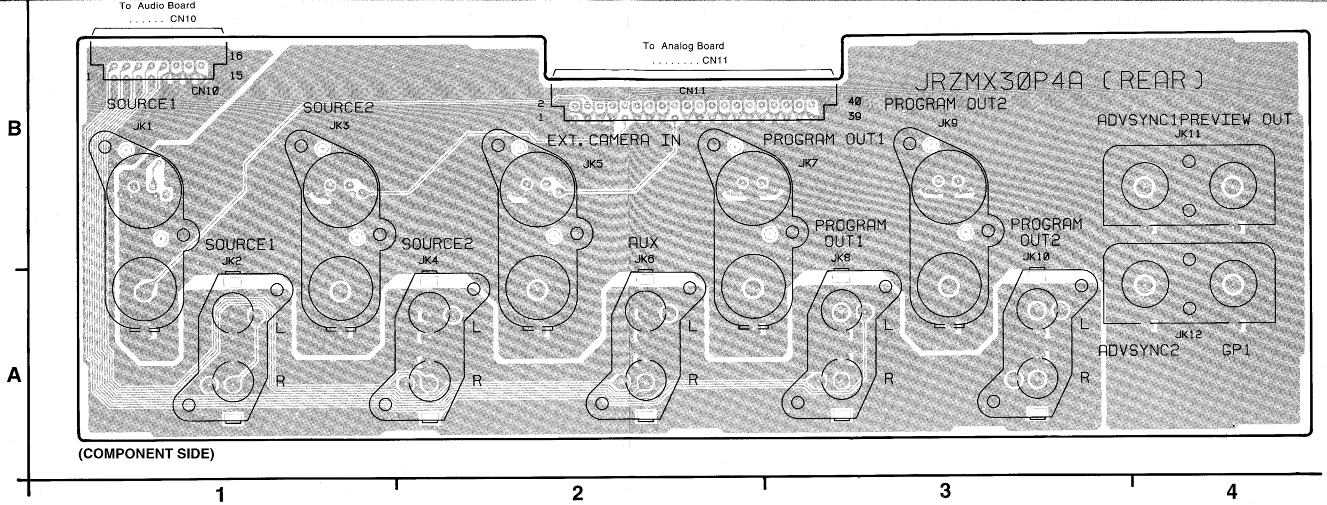

M01
1
2
TO
POWER
BOARD CN15
CN15
1 +12V
2 GND
CN9
CN9
9 FG
8 DSR
7 RXD
6 RTS
5 TXD
4 CTS
3 DTR
2 RI
1 GND
10 NC
BOTTOM VIEW
RS232C-CN
EDITING
CONTROL
TO
DIGITAL
BOARD CN9

CONDUCTOR VIEW OF REAR BOARD


REAR BOARD
To Audio Board
...... CN10
B
1
16
15
CN10
SOURCE1
JK1
SOURCE2
JK3
To Analog Board
.... CN11
CN11
2
1
40
39
EXT. CAMERA IN
JK5
PROGRAM OUT1
JK7
JRZMX30P4A (REAR)
PROGRAM OUT2
JK9
ADVSYNC1PREVIEW OUT
JK11

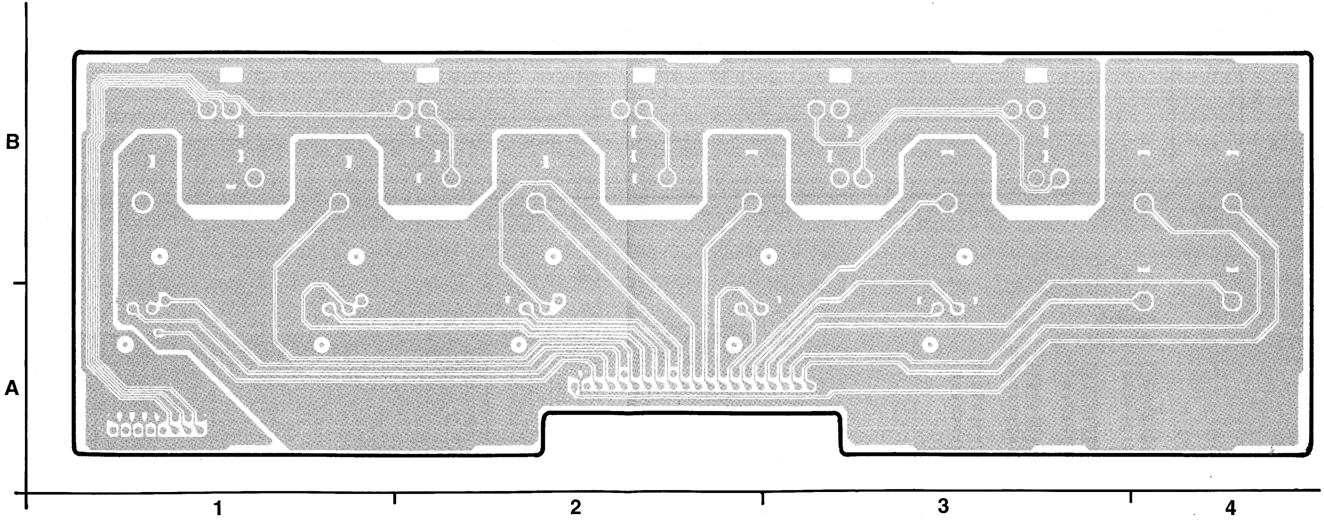
)-13.4	(S)0
15.8	15.8
5.1	5.2
5.1	5.2
0.4	-12.4
-12.0	-12.0
4.2	0


INUED PROTECTION
EPLACE ONLY WITH
FUSE."
F94V-0
SW1
5


To Audio Board
...... CN10
1
16
15
CN10
SOURCE1
JK1
SOURCE2
JK3
To Analog Board
.... CN11
CN11
2
1
40
39
JRZMX30P4A (REAR)
PROGRAM OUT2
JK9
EXT. CAMERA IN
JK5
PROGRAM OUT1
JK7
ADVSYNC1PREVIEW OUT
JK11
SOURCE1
JK2
SOURCE2
JK4
AUX
JK6
PROGRAM
OUT1
JK8
PROGRAM
OUT2
JK10
JK12
ADVSYNC2
GP1
L
R
B
A
1
2
3
4

(COMPONENT SIDE)

REAR BOARD



2	1.6	0	-12.0	-16.0
3	0	12.0	0	4.2
4	0			
5	1.7			
6	2.0			
7	1.4			
8	1.6			

4	15.1	15.8	15.8
5	4.5	5.1	5.2
6	4.5	5.1	5.2
7	0.7	0.4	-12.4
8	-11.3	-12.0	-12.0
9	-0.5	4.2	0

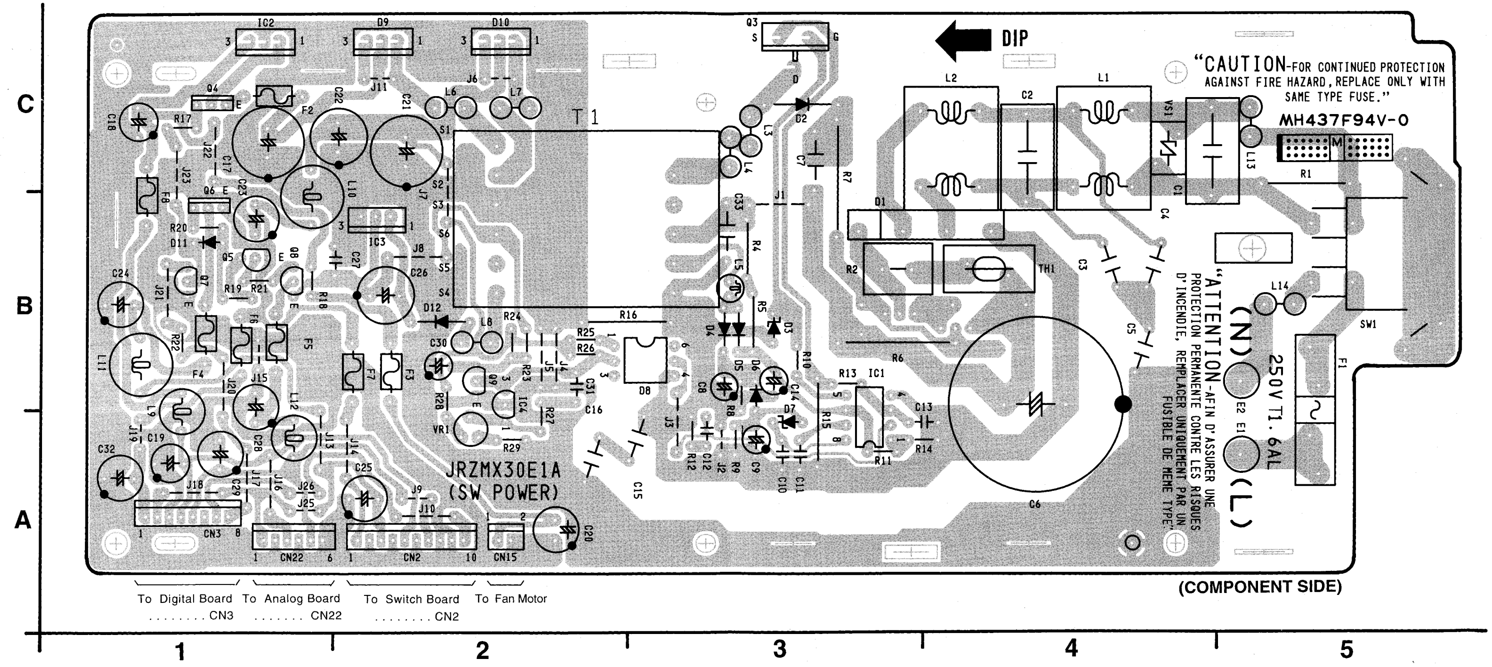
<Index>

Power Board

IC1 B2
IC2 C3
IC3 B3
IC4 A3
Q3 C2
Q4 C3
Q5 C3
Q6 C3
Q7 B3
Q8 A3
Q9 A3
D1 C2
D2 C2
D3 C2
D4 C2
D5 B2
D6 B2
D7 B2
D8 A3/B2
D9 C3
D10 C3
D11 C3
D12 B3
SW1 C1

CONDUCTOR VIEW OF POWER BOARD

POWER BOARD


C
B
A
1
2
3
4
5
IC2
D9
D10
Q3
DIP
"CAUTION-FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE FUSE."
MH437F94V-0
T1
L1
L2
C2
R1
D1
TH1
IC1
IC3
IC4
C6
SW1
F1
"ATTENTION-AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE."
(N)
(L)
250V T1.6AL
JRZMX30E1A
(SW POWER)
CN3
CN22
CN2
CN15
To Digital Board CN3
To Analog Board CN22
To Switch Board CN2
To Fan Motor
(COMPONENT SIDE)

<Index>

Power Board

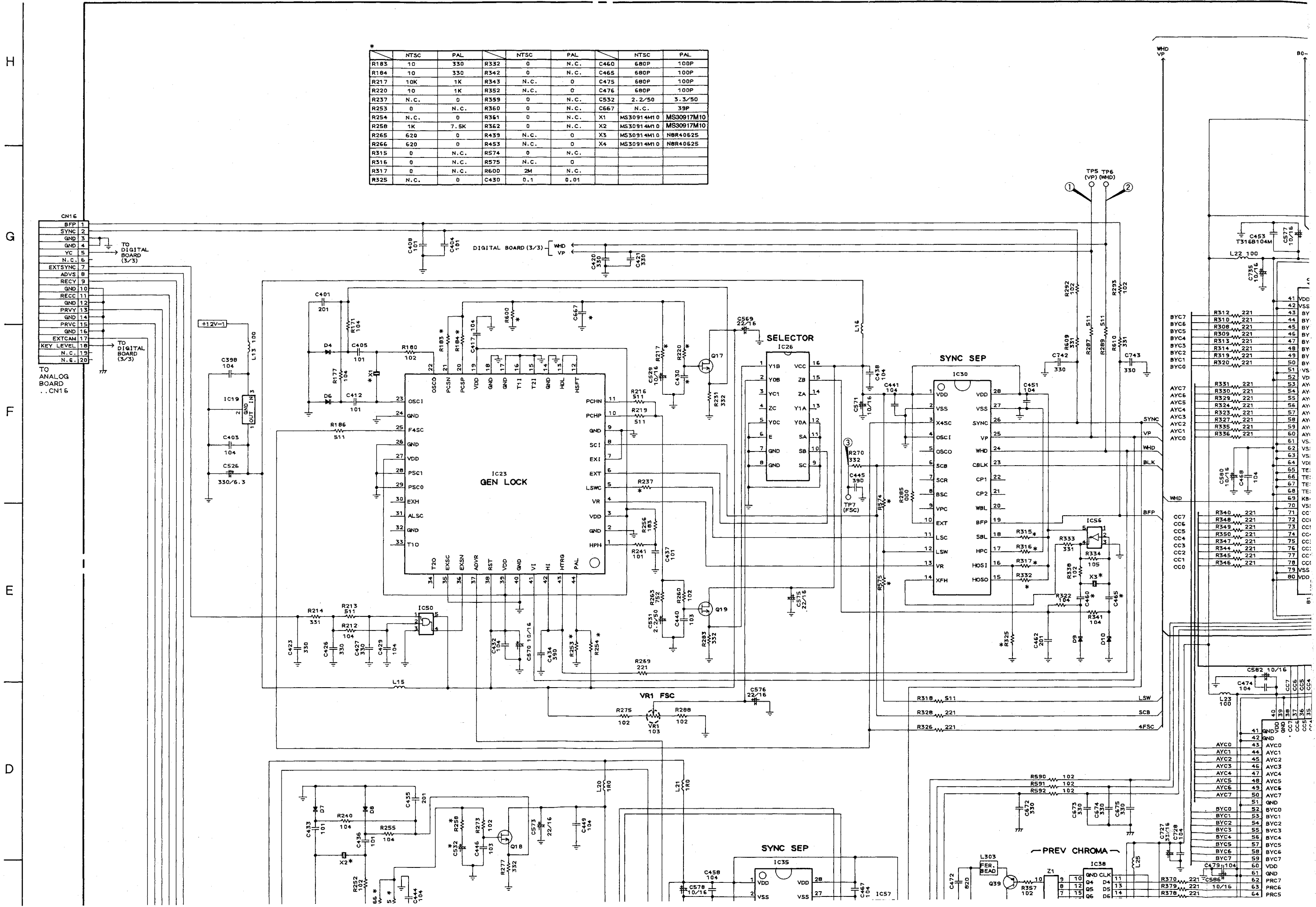
IC1 A3
IC2 C1
IC3 B2
IC4 A2
Q3 C3
Q4 C1
Q5 B1
Q6 B1
Q7 B1
Q8 B1
Q9 B2
D1 B4
D2 C3
D3 B3
D4 B3
D5 B3
D6 A6
D7 A3
D8 B3
D9 C2
D10 C2
D11 B1
D12 B2
SW1 B5

SCHEMATIC DIAGRAM OF DIGITAL BOARD

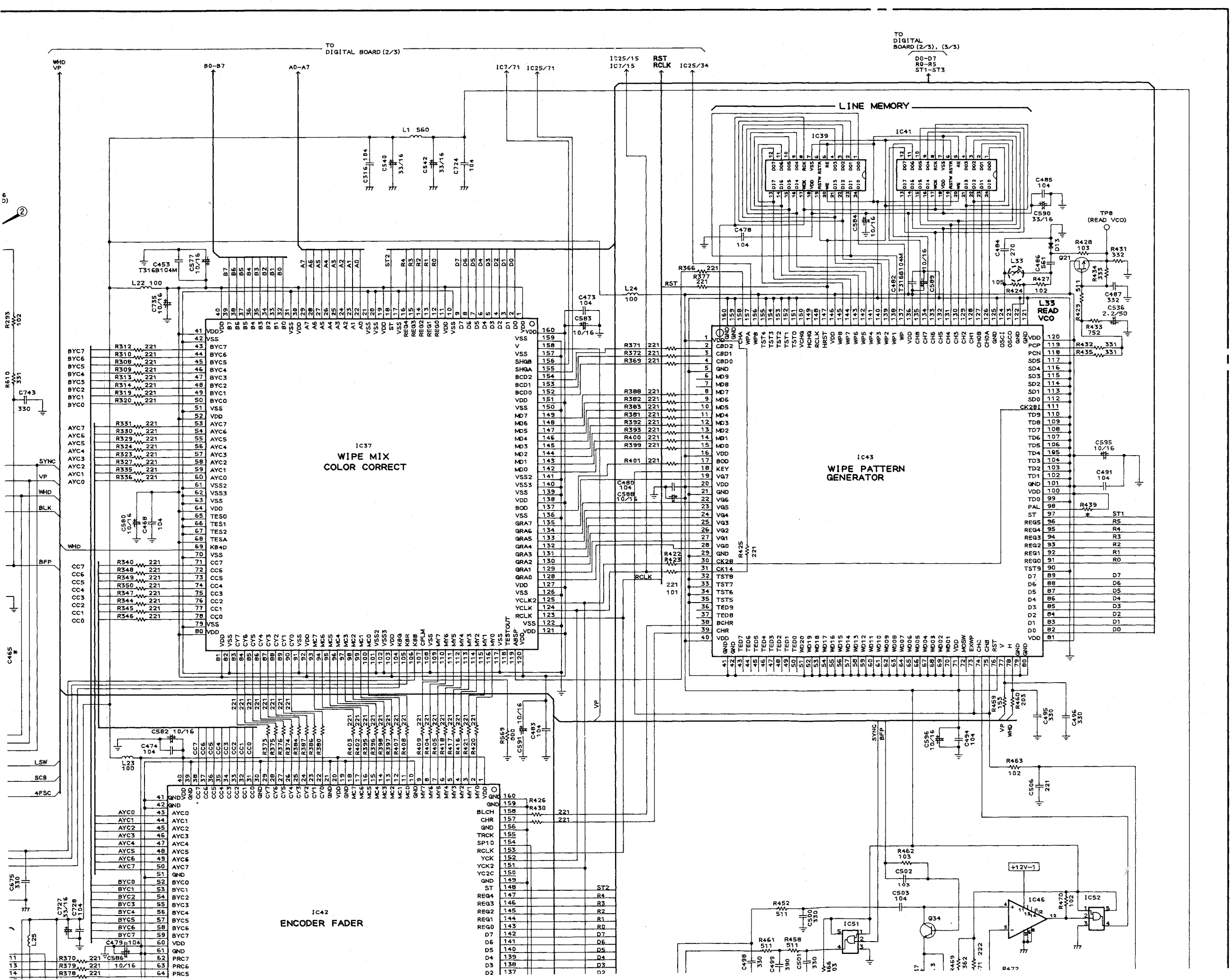
DIGITAL BOARD (1/3)

*

	NTSC	PAL		NTSC	PAL		NTSC	PAL
R183	10	330	R332	0	N.C.	C460	680P	100P
R184	10	330	R342	0	N.C.	C465	680P	100P
R217	10K	1K	R343	N.C.	0	C475	680P	100P
R220	10	1K	R352	N.C.	0	C476	680P	100P
R237	N.C.	0	R359	0	N.C.	C532	2.2/50	3.3/50
R253	0	N.C.	R360	0	N.C.	C667	N.C.	39P
R254	N.C.	0	R361	0	N.C.	X1	MS30914M10	MS30917M10
R258	1K	7.5K	R362	0	N.C.	X2	MS30914M10	MS30917M10
R265	620	0	R439	N.C.	0	X3	MS30914M10	N8R40625
R266	620	0	R453	N.C.	0	X4	MS30914M10	N8R40625
R315	0	N.C.	R574	0	N.C.			
R316	0	N.C.	R575	N.C.	0			
R317	0	N.C.	R600	2M	N.C.			
R325	N.C.	0	C430	0.1	0.01			


H
G
F
E
D
CN16
BFP 1
SYNC 2
GND 3
GND 4
YC 5
N.C. 6
EXTSYNC 7
ADVS 8
RECY 9
GND 10
RECC 11
GND 12
PRVY 13
GND 14
PRVC 15
GND 16
EXTCAM 17
KEY LEVEL 18
N.C. 19
N.C. 20
TO ANALOG BOARD ..CN16
TO DIGITAL BOARD (3/3)
DIGITAL BOARD (3/3)
WHD
VP
+12V-1
IC19
IC23
GEN LOCK
IC50
SELECTOR
IC26
SYNC SEP
IC30
IC56
VR1 FSC
TP5 (VP)
TP6 (WHD)
TP7 (FSC)
Q17
Q19
Q18
Q39
SYNC SEP
IC35
IC57
PREV CHROMA
IC38
SYNC
VP
WHD
BLK
BFP
LSW
SCB
4FSC
L13
L15
L16
L20
L21
L22
L23
L25
L303
FER. BEAD
Z1

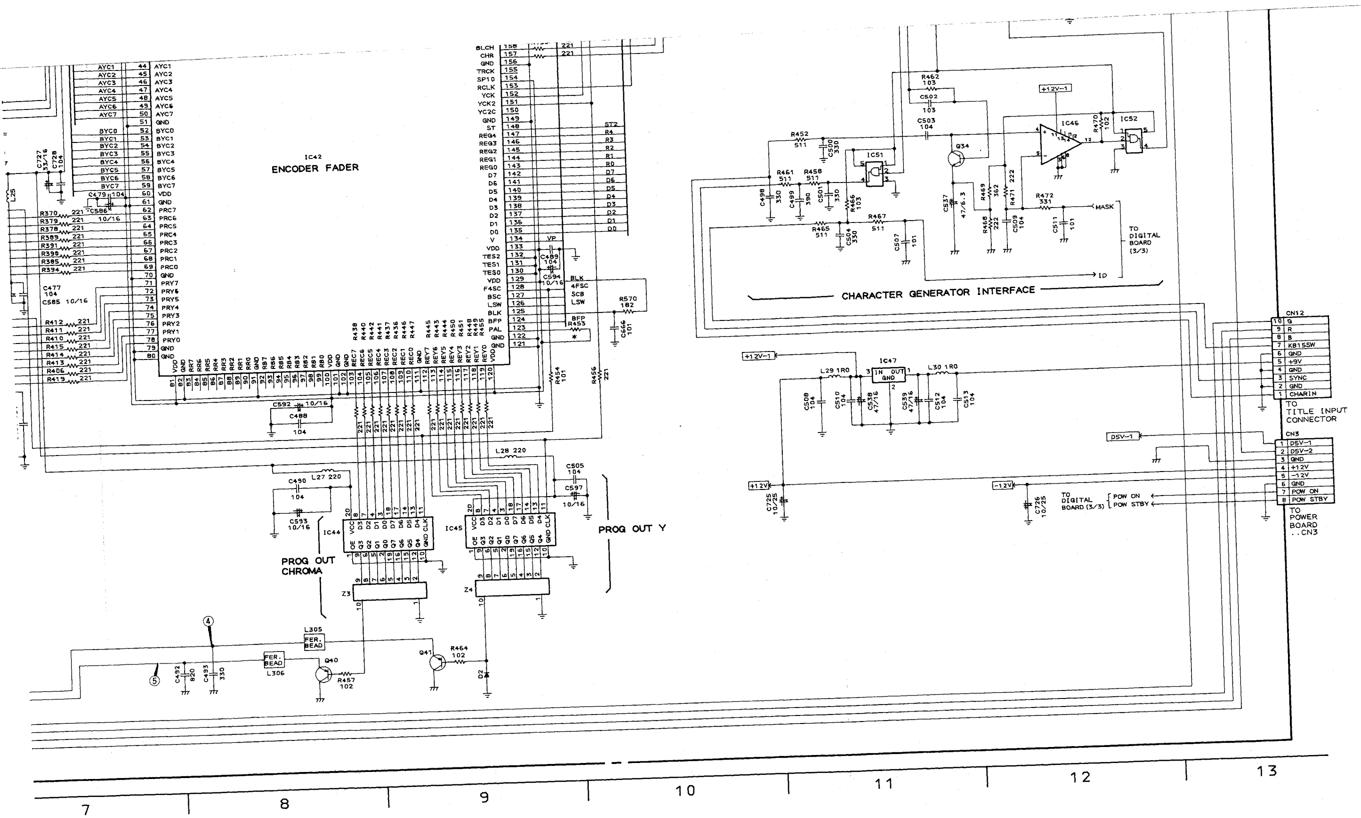
OF DIGITAL BOARD (1/3)


TO DIGITAL BOARD (2/3)
WHD VP
B0–B7
A0–A7
IC7/71 IC25/71
IC25/15 IC7/15
RST RCLK
IC25/34
TO DIGITAL BOARD (2/3), (3/3)
D0–D7
R0–R5
ST1–ST3
LINE MEMORY
IC39
IC41
TP8 (READ VCO)
L33 READ VCO
L1 560
L22 100
L23 100
L24 100
IC37
WIPE MIX
COLOR CORRECT
IC43
WIPE PATTERN
GENERATOR
IC42
ENCODER FADER
IC46
IC51
IC52
Q21
Q34
+12V-1
SYNC
VP
WHD
BLK
BFP
LSW
SCB
4FSC

DIGITAL BOARD

	IC37	IC42	IC43		IC37	IC42	IC43
Pin 1	5.0	4.9	4.9	Pin 55	1.7	2.1	0
2	0.1	2.2	2.1	56	1.8	1.6	0
3	0.1	2.2	2.1	57	2.1	1.8	0
4	0.1	2.3	0.5	58	1.9	1.8	0
5	0.1	2.2	0	59	2.0	3.2	0
6	0.1	2.1	0	60	2.0	1.9	0
7	0.1	2.2	0	61	0	0	0
8	0.1	2.3	2.6	62	0	2.8	0
9	0.1	2.9	2.6	63	0	1.7	0
10	0	0	2.6	64	5.0	1.7	0
11	5.0	2.1	2.6	65	0	1.7	0
12	4.5	1.9	2.6	66	0	1.6	0
13	4.5	1.9	2.6	67	0	1.7	0
14	0.1	2.0	2.6	68	5.0	1.7	0
15	0.1	1.3	2.6	69	0.7	1.7	0
16	4.4	1.5	4.9	70	0	0	0
17	0	1.5	0	71	3.3	2.6	4.9
18	0	3.4	4.5	72	1.5	2.2	0
19	5.0	0	1.5	73	1.4	2.2	3.8
20	0	4.9	1.9	74	1.5	2.1	0
21	0	0	0	75	1.3	2.0	3.8
22	2.1	0	1.7	76	1.5	2.0	4.9
23	2.0	0.5	1.9	77	1.4	2.0	0
24	2.0	2.6	2.3	78	1.4	1.9	0.7
25	2.1	0.5	2.3	79	0	0	0
26	2.0	2.0	2.3	80	5.0	0	0
27	1.8	2.1	2.3	81	5.0	4.9	4.9
28	2.0	2.1	2.3	82	0	0	0.1
29	3.1	1.1	0	83	1.1	3.3	0.1
30	5.0	0	2.0	84	2.1	1.6	0.1
31	0	1.5	2.3	85	2.1	1.6	0.1
32	2.2	1.5	0	86	2.0	1.4	0.1
33	2.3	1.5	0	87	0.5	1.6	0.1
34	2.2	1.5	0	88	2.6	1.8	0.8
35	2.3	1.5	0	89	0.5	1.7	0.8
36	1.9	1.5	0	90	0	1.9	0
37	1.7	1.5	0	91	0	0	4.6
38	1.8	3.4	0	92	5.0	3.7	4.6
39	3.4	0	0	93	3.7	1.2	0.1
40	5.0	4.9	4.9	94	1.1	1.3	0.1
41	5.0	0	0	95	1.2	0.9	4.5
42	0	0	0	96	1.2	2.1	3.8
43	3.4	2.1	0	97	1.9	1.7	0
44	1.7	2.0	0	98	1.8	1.8	4.9
45	1.7	1.9	0	99	1.9	1.8	0
46	1.7	2.1	0	100	2.0	4.9	4.9
47	2.1	1.8	0	101	0	0	0
48	2.2	1.9	0	102	0	0	0
49	2.2	1.9	0	103	5.0	2.8	0
50	2.1	2.9	0	104	4.9	1.7	0
51	0	0	0	105	4.9	1.8	0
52	5.0	2.2	0	106	4.9	1.7	0
53	3.1	2.3	0	107	0	1.6	0
54	1.9	2.3	0	108	0	1.7	0

	IC37	IC42	IC43		IC23	IC32
Pin 109	2.8	1.7	0	Pin 1	0.3	0.3
110	2.5	1.7	0	2	0	0
111	2.3	0	2.0	3	5.0	5.1
112	2.1	2.6	0	4	5.0	5.1
113	2.2	2.2	0	5	-	-
114	2.2	2.2	0	6	5.0	5.1
115	2.2	2.1	0	7	0	0
116	2.1	2.0	0	8	2.0	2.1
117	0	2.0	0	9	0	0
118	5.0	2.0	1.9	10	5.0	4.2
119	5.0	1.9	1.9	11	5.0	4.2
120	5.0	4.9	4.9	12	4.8	5.0
121	5.0	0	0	13	4.8	0.8
122	0	0	0	14	0	0
123	2.4	4.9	2.2	15	0	0
124	2.3	0.1	2.3	16	0	0
125	2.1	1.2	0	17	0	0
126	0	2.4	0	18	0	0
127	5.0	2.2	0	19	5.0	5.1
128	2.3	2.4	0	20	5.0	5.1


IC42
ENCODER FADER
CHARACTER GENERATOR INTERFACE
IC44
IC45
IC46
IC47
IC51
IC52
Q34
Q40
Q41
PROG OUT CHROMA
PROG OUT Y
MASK
ID
TO DIGITAL BOARD (3/3)
CN12
10 G
9 R
8 B
7 KB1SSW
6 GND
5 +9V
4 GND
3 SYNC
2 GND
1 CHARIN
TO TITLE INPUT CONNECTOR
CN3
1 DSV-1
2 DSV-2
3 GND
4 +12V
5 -12V
6 GND
7 POW ON
8 POW STBY
TO POWER BOARD ..CN3
TO DIGITAL BOARD (3/3)
POW ON
POW STBY
+12V-1
DSV-1
+12V
-12V
7
8
9
10
11
12
13

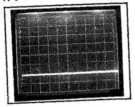
115	2.2	2.1	0
116	2.1	2.0	0
117	0	2.0	0
118	5.0	2.0	1.9
119	5.0	1.9	1.9
120	5.0	4.9	4.9
121	5.0	0	0
122	0	0	0
123	2.4	4.9	2.2
124	2.3	0.1	2.3
125	2.1	1.2	0
126	0	2.4	0
127	5.0	2.2	0
128	2.3	2.4	0
129	2.3	4.9	0
130	2.3	0	0
131	2.3	0	0
132	2.3	0	0
133	1.9	4.9	0
134	1.7	0	0
135	1.5	0.1	0
136	0	0.1	4.9
137	0	0.5	2.6
138	5.0	0.1	2.0
139	0	0.1	2.0
140	0	0.1	2.1
141	0	0.8	2.1
142	2.6	0.8	2.1
143	2.6	4.6	2.1
144	2.6	4.6	2.1
145	2.6	0.1	2.1
146	2.6	0.1	4.9
147	2.6	4.5	4.9
148	2.6	0	1.8
149	2.6	0	3.9
150	0	1.9	4.5
151	5.0	2.1	0
152	2.1	2.3	0
153	2.1	2.4	0
154	2.1	4.9	0
155	0	0	0
156	0	0	4.9
157	0	0	5.0
158	0	0	4.9
159	0	0	0
160	5.0	0	0

7	0	0
8	2.0	2.1
9	0	0
10	5.0	4.2
11	5.0	4.2
12	4.8	5.0
13	4.8	0.8
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	5.0	5.1
20	5.0	5.1
21	5.0	5.1
22	2.5	2.6
23	2.4	2.3
24	0	0
25	2.3	2.4
26	0	0
27	5.0	5.1
28	0	0
29	0	0
30	0.1	1.0
31	1.3	1.1
32	0	0
33	5.0	5.1
34	2.5	2.7
35	0	0
36	4.6	4.4
37	5.0	5.1
38	5.0	5.1
39	5.0	5.1
40	0	0
41	0	0
42	0.7	0.8
43	0.7	0.8
44	5.0	5.1

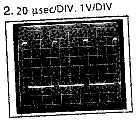
	IC26	IC38	IC40	IC44	IC45	IC46
Pin 1	0.5	0	0	0	0	1.9
2	2.8	1.8	2.4	1.8	2.4	1.9
3	1.3	1.7	2.3	1.7	2.3	0
4	0	1.9	2.4	1.9	2.4	2.2
5	0	2.0	2.5	2.0	2.5	1.8
6	0	1.9	2.6	1.9	2.6	1.7
7	0	1.8	2.6	1.8	2.6	1.6
8	0	2.9	3.0	2.9	3.0	0
9	0	3.0	3.0	3.0	3.0	0.5
10	5.0	0	0	0	0	–
11	0	2.3	2.1	2.4	2.1	11.8
12	0	1.6	2.3	1.8	2.3	0.3
13	1.3	1.7	2.3	1.7	2.3.	–
14	0	1.7	2.3	1.8	2.3	0.9
15	0.5	1.8	2.3	1.8	2.3	
16	5.0	1.8	2.3	1.8	2.3	
17		1.7	2.3	1.8	2.3	
18		1.7	2.3	1.7	2.3	
19		1.8	2.3	1.8	2.3	
20		5.0	5.0	5.0	5.0	

	B	C	E
Q14	2.4	0	3.2
17	(G)5.0	(D)5.0	(S)4.8
18	(G)5.1	(D)5.1	(S)5.0
19	(G)0	(D)5.0	(S)0.5
20	(G)4.3	(D)5.1	(S)4.3
21	(G)1.9	(D)4.9	(S)2.1
31	1.8	5.1	1.2
34	-0.3	1.9	2.5
39	2.7	0	3.4
40	2.7	0	3.4
41	2.4	0	3.2

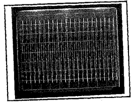
1. 5 msec/DIV. 1V/DIV



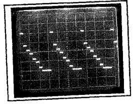
2. 20 µsec/DIV. 1V/DIV



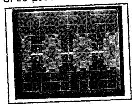
3. 0.5 µsec/DIV. 0.2V/DIV



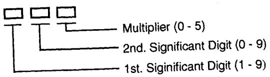
4. 20 µsec/DIV. 1V/DIV



5. 20 µsec/DIV. 1V/DIV



Note: The value indicated in schematic diagram should be read as follows:

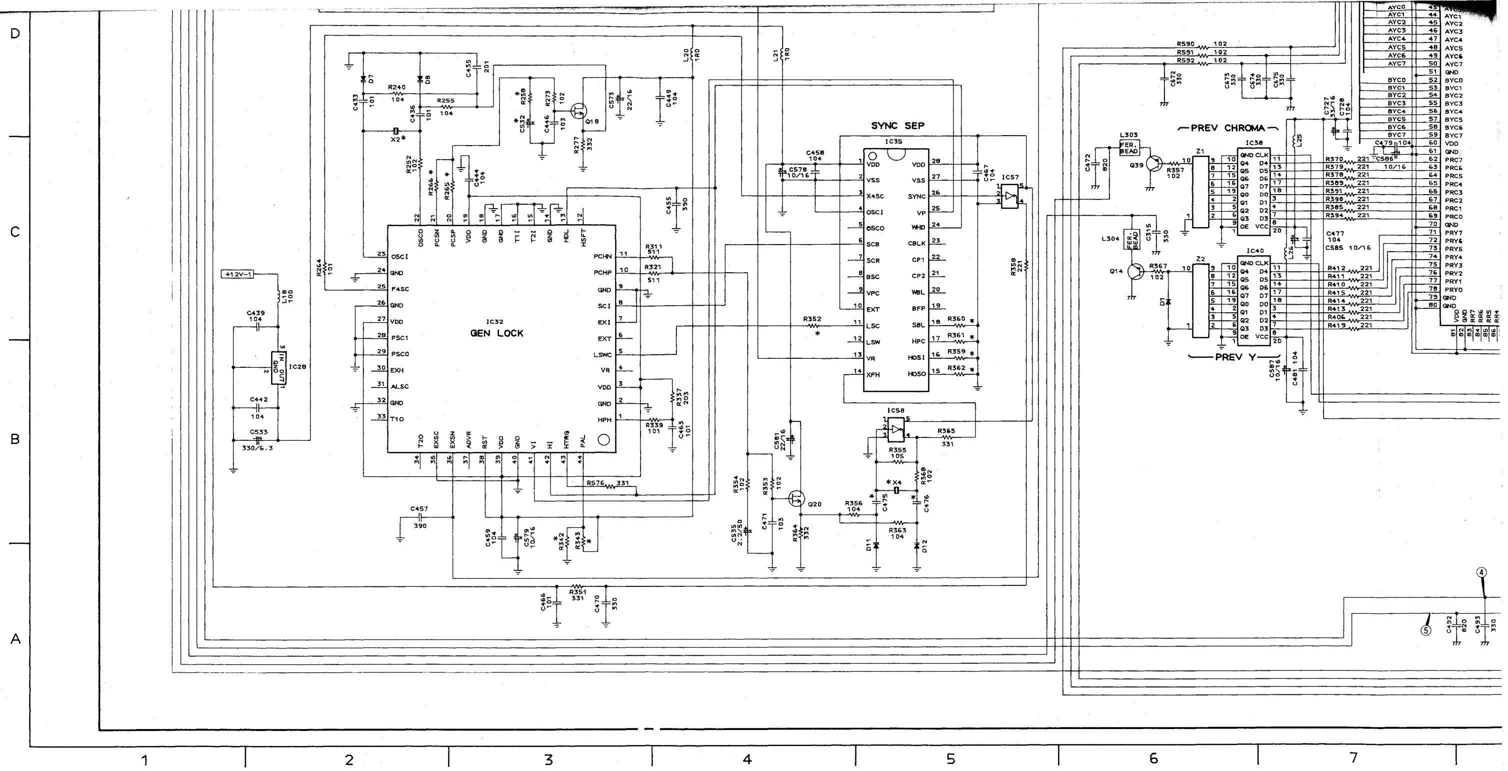

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

For Resistor: 330 ⟶ 33 x 10^0 = 33Ω
561 ⟶ 56 x 10^1 = 560Ω
123 ⟶ 12 x 10^3 = 12kΩ

For Capacitor: 820 ⟶ 82 x 10^0 = 82pF
102 ⟶ 10 x 10^2 = 1000pF = 0.001µF
104 ⟶ 10 x 10^4 = 100000pF = 0.1µF

The suffix attached to capacitance indicates a type of capacitor.


D
C
B
A
1
2
3
4
5
6
7
SYNC SEP
IC35
GEN LOCK
IC32
IC28
IC57
IC58
PREV CHROMA
PREV Y
IC38
IC40
Z1
Z2
Q18
Q20
Q39
Q14
L303
L304
FER. BEAD
+12V-1
X2
X4
D7
D8
D11
D12
D1
OSCI
GND
F4SC
VDD
PSC1
PSC0
EXH
ALSC
T10
T20
EXSC
EXSN
ADVR
RST
VI
HI
HTRG
PAL
PCHN
PCHP
SCI
EXI
EXT
LSWC
VR
HPH
OSCO
PCSN
PCSP
TII
T2I
HDL
HSFT
VSS
X4SC
OSCI
SCB
SCR
BSC
VPC
EXT
LSC
LSW
XFH
SYNC
VP
WHD
CBLK
CP1
CP2
WBL
BFP
SBL
HPC
HOSI
HOSO
AYC0
AYC1
AYC2
AYC3
AYC4
AYC5
AYC6
AYC7
BYC0
BYC1
BYC2
BYC3
BYC4
BYC5
BYC6
BYC7
PRC7
PRC6
PRC5
PRC4
PRC3
PRC2
PRC1
PRC0
PRY7
PRY6
PRY5
PRY4
PRY3
PRY2
PRY1
PRY0
④
⑤

<Index>

Digital Board (1/3)

IC19	F2	IC42	D8	Q14	C6	D4	F2
IC23	F3	IC43	F11	Q17	F4	D6	F2
IC26	F5	IC44	B8	Q18	D3	D7	D2
IC28	B2	IC45	B9	Q19	E4	D8	D2
IC30	F6	IC46	D12	Q20	B4	D9	E6
IC32	C3	IC47	B11	Q21	G12	D10	E7
IC35	C5	IC50	E3	Q34	D11	D11	A5
IC37	F8	IC51	C11	Q39	C6	D12	A5
IC38	C6	IC52	D12	Q40	A8	D13	G12
IC39	G11	IC56	E6	Q41	A9		
IC40	C6	IC57	C5	D1	C6		
IC41	G11	IC58	B5	D2	A9		

DIGITAL BOARD

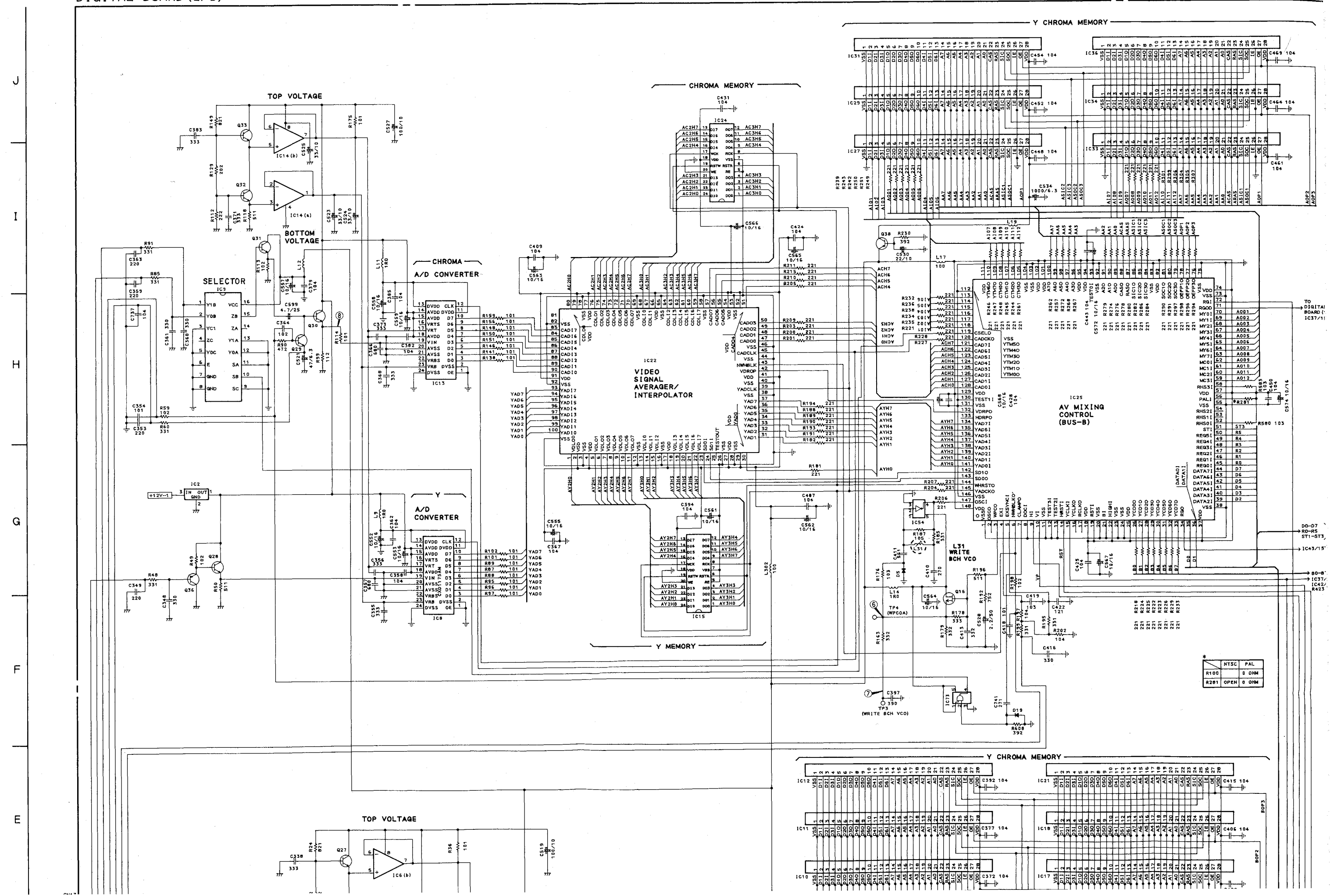
	IC24	IC27	IC29	IC30	IC31	IC33	IC34	IC35	IC36	IC39	IC41
Pin 1	1.8	0	0	5.0	0	0	0	5.1	0	2.0	0
2	1.8	2.6	2.6	0	2.6	2.7	2.8	0	2.8	2.0	0
3	1.7	2.9	2.8	2.3	2.8	3.2	3.2	2.4	3.2	2.0	0
4	2.3	3.0	3.0	0	3.0	2.5	2.5	0	2.5	2.0	0
5	0	2.8	2.8	5.0	2.8	2.8	2.8	5.1	2.8	0	0
6	5.0	2.9	3.0	2.0	3.0	3.2	3.2	2.1	3.2	0.7	4.9
7	0	3.1	3.0	2.0	3.1	2.4	2.4	2.1	2.5	0.5	0
8	2.4	2.8	2.9	0.1	2.8	2.5	2.5	0.1	2.5	2.3	2.3
9	1.1	2.6	2.6	0.3	2.6	1.6	1.7	0	1.7	2.0	0
10	0.8	2.6	2.6	5.0	2.6	2.4	2.5	5.1	2.4	2.0	0
11	0.9	2.4	2.4	1.6	2.4	2.8	2.8	1.6	2.8	2.0	0
12	2.8	2.3	2.4	2.5	2.4	1.3	1.4	2.6	1.4	2.0	0
13	3.8	2.5	2.5	5.0	2.5	2.5	2.5	5.0	2.5	2.0	0
14	1.2	0.1	0.1	2.5	0.1	0.1	0.1	2.6	0.1	2.0	0
15	1.1	0.1	0.1	5.0	0.1	0.1	0.1	5.1	0.1	2.0	0
16	1.5	0.2	0.2	0	0.2	0.2	0.2	0	0.2	2.0	0
17	1.9	0.1	0.1	5.0	0.1	0.1	0.1	5.1	0.1	2.3	2.3
18	5.0	0.1	0.1	4.2	0.1	0.1	0.1	4.3	0.1	4.9	4.9
19	5.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	4.9	4.9
20	0	0.1	0.1	3.3	0.1	0.1	0.1	3.4	0.1	0	0
21	3.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	2.0	0
22	2.4	4.9	4.9	0.1	4.9	4.9	4.9	0.1	4.9	2.0	0
23	2.6	4.9	4.9	1.2	4.9	4.9	4.9	1.3	4.9	2.0	0
24	2.3	0.6	0.6	0.7	0.6	0.6	0.6	0.8	0.6	2.6	0
25		0.7	0.7	0	0.7	0.7	0.7	0	0.7		
26		0	0	4.4	0	0	0	4.7	0		
27		4.3	4.3	0	4.3	4.3	4.3	0	4.3		
28		5.0	5.0	5.0	5.0	5.0	5.0	5.1	5.0		

	IC1	IC19	IC28	IC47	IC50	IC51	IC52	IC56	IC57	IC58	IC63
Pin 1	5.0	5.0	5.1	9.0	4.4	4.9	4.9	-	0.5	-	4.9
2	0	0	0	0	4.6	4.4	0.3	2.5	4.7	2.5	0
3	11.8	11.8	11.8	11.8	0	0	0	0	0	0	11.9
4					4.6	4.5	0	2.4	0.5	2.4	
5					5.0	4.9	4.9	5.0	5.1	5.1	
6											
7											
8											

	B	C	E
Q14	2.4	0	3.2
17	(G)5.0	(D)5.0	(S)4.8
18	(G)5.1	(D)5.1	(S)5.0
19	(G)0	(D)5.0	(S)0.5
20	(G)4.3	(D)5.1	(S)4.3
21	(G)1.9	(D)4.9	(S)2.1
31	1.8	5.1	1.2
34	-0.3	1.9	2.5
39	2.7	0	3.4
40	2.7	0	3.4
41	2.4	0	3.2

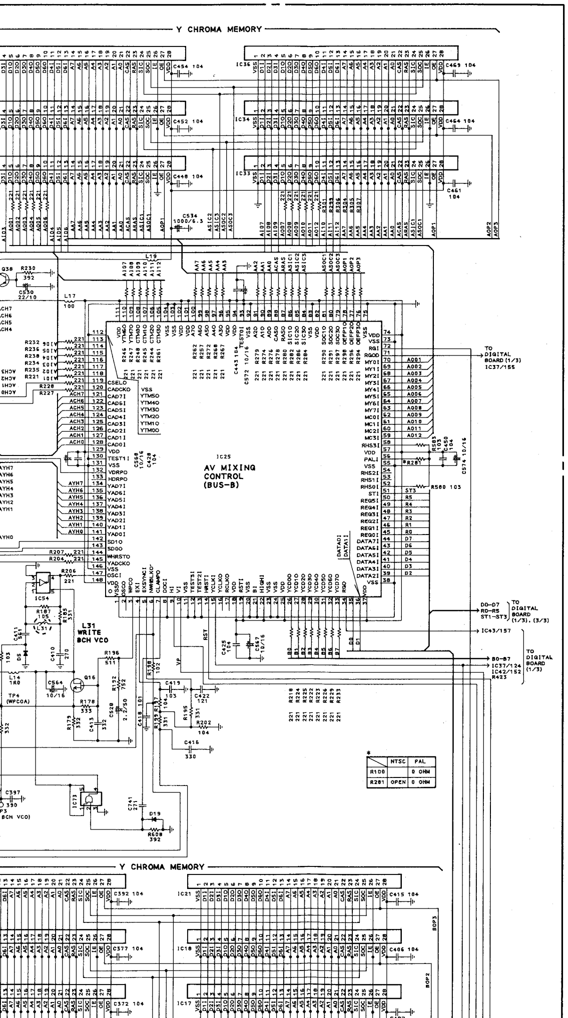
SCHEMATIC DIAGRAM OF DIGITAL BOARD (2/3)

DIGITAL BOARD (2/3)


J
I
H
G
F
E
TOP VOLTAGE
BOTTOM VOLTAGE
SELECTOR
IC9
IC14 (a)
IC14 (b)
CHROMA A/D CONVERTER
IC13
Y A/D CONVERTER
IC8
IC2
+12V-1
CHROMA MEMORY
IC24
IC22
VIDEO SIGNAL AVERAGER/ INTERPOLATOR
Y MEMORY
IC15
Y CHROMA MEMORY
IC31
IC29
IC27
IC36
IC34
IC33
IC25
AV MIXING CONTROL (BUS-B)
IC54
L31 WRITE BCH VCO
TP4 (WPCOA)
TP3 (WRITE BCH VCO)
IC73
TO DIGITAL BOARD
IC12
IC11
IC10
IC21
IC18
IC17
IC6 (b)
Q27
Q28
Q29
Q30
Q31
Q32
Q33
Q36
Q38
Q16
D19
⑥
⑦
⑧

*	NTSC	PAL
R100		0 OHM
R281	OPEN	0 OHM

IATIC DIAGRAM OF DIGITAL BOARD (2/3)



DIGITAL BOARD

	IC3	IC5	IC8	IC10	IC11	IC12	IC13	IC15	IC17	IC18	IC21
Pin 1	0	0	0	0	0	0	0	2.0	0	0	0
2	0	0	0	2.1	2.1	2.1	0	2.2	2.6	2.6	2.6
3	1.1	2.6	1.9	2.2	2.2	2.2	1.6	2.3	3.0	3.0	3.0
4	1.2	4.5	2.2	2.2	2.2	2.2	1.8	1.8	2.4	2.4	2.4
5	1.3	1.1	2.4	2.4	2.4	2.3	1.6	0	2.7	2.7	2.7
6	1.4	1.1	1.9	2.5	2.5	2.4	2.8	5.0	3.1	3.1	3.1
7	1.6	0	1.9	2.5	2.5	2.4	1.1	0	2.4	2.4	2.4
8	1.8	0	2.2	2.5	2.5	2.4	0.9	2.4	2.4	2.3	2.3
9	2.3	0	2.5	2.5	2.4	2.3	0.9	1.7	2.1	2.0	2.0
10	2.4	5.0	2.9	2.5	2.5	2.5	3.5	1.8	2.5	2.4	2.5
11	5.0	5.0	5.0	2.2	2.2	2.2	5.0	1.9	2.4	2.4	2.4
12	2.3	2.4	2.4	2.2	2.2	2.3	2.4	2.2	1.7	1.7	1.7
13	5.0	5.0	1.8	2.4	2..4	2.3	5.0	2.9	2.5	2.5	2.5
14	5.0	5.0	5.0	0.1	0.1	0.1	5.0	2.6	0.1	0.1	0.1
15	5.0	5.0	5.0	0.1	0.1	0.1	5.0	2.4	0.1	0.1	0.1
16	5.0	5.0	5.0	0.2	0.2	0.2	5.0	2.3	0.2	0.2	0.1
17	3.6	3.6	3.5	0.1	0.1	0.1	3.5	2.4	0.1	0.1	0.1
18	5.0	5.0	5.0	0.1	0.1	0.1	5.0	5.0	0.1	0.1	0.1
19	2.4	2.6	2.7	0.1	0.1	0.1	2.6	5.0	0.1	0.1	0.1
20	0	0	0	0.1	0.1	0.1	0	0	0.1	0.1	0.1
21	0	0	0	0.1	0.1	0.1	0	2.3	0.1	0.1	0.1
22	0	0	0	4.9	4.9	4.9	0	2.9	4.9	4.9	4.9
23	1.6	1.6	1.6	4.9	4.9	4.9	1.6	2.8	4.9	4.9	4.9
24	0	0	0	0.6	0.6	0.6	0	2.6	0.6	0.6	0.6
25				0.7	0.7	0.7			0.7	0.7	0.7
26				0	0	0			0	0	0
27				4.3	4.3	4.3			4.3	4.3	4.3
28				5.0	5.0	5.0			5.0	5.0	5.0

	IC7	IC25
Pin 1	0	0
2	2.3	2.3
3	1.5	1.8
4	4.1	4.2
5	4.5	4.5
6	4.3	4.4
7	0.2	0.2
8	0	0
9	0.8	0.8
10	0	0
11	0	0
12	0	0
13	0	0
14	4.9	4.9
15	2.3	2.3
16	2.3	2.4
17	2.3	2.3
18	5.0	5.0
19	5.1	5.0
20	0	0
21	5.1	0
22	5.1	5.0
23	0	0
24	0	0
25	5.1	5.0
26	2.0	2.2
27	2.0	2.3
28	2.0	2.3
29	2.0	2.4
30	2.1	2.0
31	1.9	1.8
32	2.2	1.9
33	3.0	3.4
34	5.1	5.0
35	0.1	0.1
36	0.1	0.1
37	5.1	5.0
38	0	0
39	0.1	0.1
40	0.1	0.1
41	0.1	0.1
42	0.1	0.1
43	0.1	0.1
44	0.1	0.1
45	4.6	4.6
46	4.6	4.6
47	0.1	0.1
48	0.1	0.1
49	4.5	4.5
50	3.8	3.8
Pin 51	0	0
52	4.6	4.6
53	0.1	0
54	0.1	0
55	0	0
56	5.1	5.0
57	5.1	5.0
58	4.6	4.9
59	2.2	2.2
60	2.0	1.5
61	2.2	2.4
62	2.3	2.3
63	2.9	3.2
64	2.9	2.9
65	2.4	2.8
66	2.4	2.7
67	2.4	2.8
68	2.4	3.0
69	2.4	2.9
70	2.3	2.8
71	0	0
72	5.1	5.1
73	0	0
74	5.1	5.0
75	0	0
76	4.3	4.3
77	4.3	4.3
78	4.3	4.3
79	0.7	0.6
80	0.7	0.6
81	0.7	0.6
82	5.1	5.0
83	0	0
84	0.5	0.6
85	0.6	0.6
86	0.6	0.6
87	4.9	4.9
88	4.9	4.9
89	0.1	0.1
90	0.1	0.1
91	0.1	0.1
92	0	0
93	0	0
94	5.1	5.0
95	5.1	5.0
96	0.1	0.1
97	0.1	0.1
98	0.2	0.2
99	0.1	0.1
100	0.1	0.1
Pin 101	5.1	5.0
102	5.1	5.0
103	0	0
104	0	0
105	2.3	2.3
106	1.7	1.3
107	2.4	2.7
108	2.4	2.4
109	2.8	3.0
110	2.7	2.7
111	5.1	5.0
112	0	0
113	2.3	2.5
114	2.2	2.4
115	2.2	2.5
116	2.2	3.0
117	2.2	2.9
118	2.1	2.7
119	2.5	2.4
120	2.3	2.2
121	2.9	3.9
122	1.3	1.2
123	1.2	1.1
124	1.5	1.5
125	1.6	3.3
126	1.7	2.4
127	1.6	2.5
128	1.9	2.4
129	5.1	5.0
130	0	0
131	0	0
132	5.1	5.0
133	5.0	5.0
134	2.7	3.1
135	2.5	2.7
136	1.9	2.6
137	1.8	2.5
138	1.7	2.5
139	1.7	3.1
140	1.6	2.9
141	1.5	2.7
142	0	0
143	0	0
144	5.1	5.0
145	2.4	2.4
146	0	0
147	2.6	2.6
148	5.1	5.0

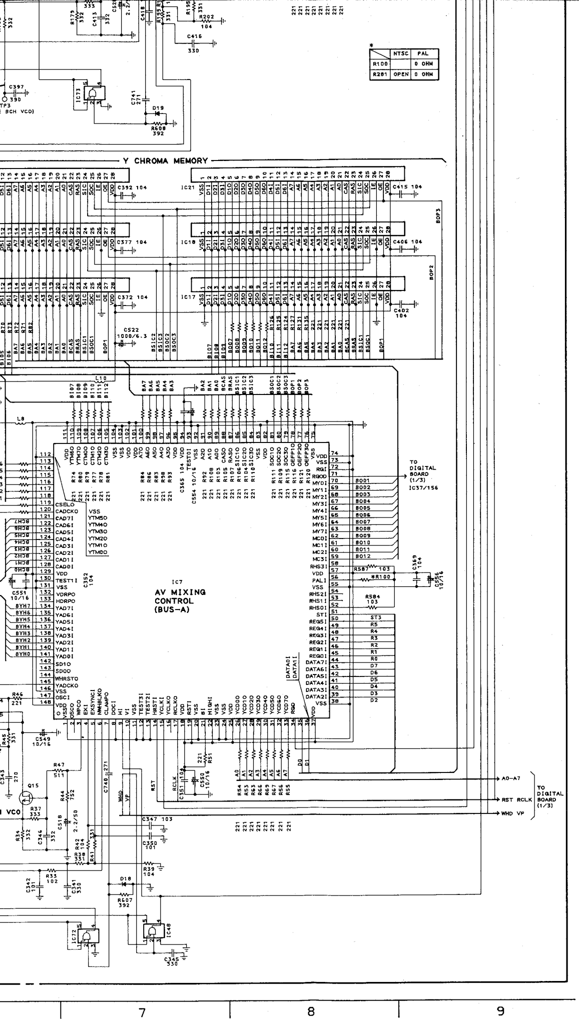
	IC4	IC9
Pin 1	1.8	1.8
2	1.9	1.8
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	2.4	2.4
11	0	0
12	0	0
13	0	0
14	0	0
15	1.8	1.8
16	5.0	5.0
17		
18		
19		
20		

	B	C	E
15	(G)1.5	(D)5.1	(S)1.9
16	(G)1.9	(D)5.1	(S)2.1
22	3.0	5.0	2.3
23	0.2	3.2	3.2
24	1.9	5.1	1.3
25	3.2	5.0	2.6
26	2.2	3.6	1.5
27	4.2	5.0	3.6
28	3.1	5.0	2.4
29	0.2	3.2	3.2
30	3.2	5.0	2.6
32	2.2	3.5	1.6
33	4.2	5.0	3.5
35	2.3	0	3.0
36	2.4	0	3.1
37	4.2	5.0	5.1
38	4.3	5.0	5.1

	IC22
Pin 1	2.6
2	5.0
3	0
4	5.0
5	2.8
6	2.9
7	2.4
8	2.3
9	2.4
10	2.6
11	3.0
12	0
13	1.9
14	2.0
15	2.1
16	0
17	5.0
18	1.7
19	1.7
20	1.8
Pin 21	1.9
22	2.2
23	0
24	0
25	5.0
26	0
27	5.0
28	0
29	5.0
30	2.6
31	2.8
32	2.9
33	2.3
34	2.3
35	2.4
36	2.6
37	2.9
38	0
39	2.4
40	0
Pin 41	5.0
42	5.0
43	4.3
44	0
45	2.4
46	0
47	2.4
48	2.5
49	2.4
50	3.2
51	1.5
52	5.0
53	0
54	5.0
55	1.2
56	1.2
57	3.8
58	0
59	2.9
60	0.9
Pin 61	0.9
62	1.1
63	2.4
64	1.7
65	0
66	5.0
67	1.8
68	1.7
69	0
70	3.8
71	1.2
72	1.2
73	1.5
74	3.2
75	2.4
76	2.5
77	5.0
78	0
79	5.0
80	2.4

	IC2	IC6	IC14	IC48	IC53	IC54	IC72	IC73
Pin 1	5.0	1.6	1.6	5.1	-	-	5.1	5.1
2	0	1.6	1.6	0.7	2.6	2.6	2.5	0.1
3	11.8	1.6	0.5	0	0	0	0	0
4		0	0	0.8	2.6	2.6	0.1	0.1
5		3.6	3.5	5.1	5.1	5.1	5.1	5.1
6		3.6	3.5					
7		3.6	3.5					

6. 20 µsec/DIV. 50mV/DIV


Y CHROMA MEMORY
IC21
IC18
IC17
IC73
IC7
AV MIXING
CONTROL
(BUS-A)
TO
DIGITAL
BOARD
(1/3)
IC37/156
A0–A7
RST RCLK
WHD VP
TO
DIGITAL
BOARD
(1/3)
Q15
D18
D19
IC72
IC48
BCH VCO
7
8
9

*

	NTSC	PAL
R100		0 OHM
R281	OPEN	0 OHM

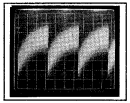
7	0	0
8	0	0
9	0	0
10	2.4	2.4
11	0	0
12	0	0
13	0	0
14	0	0
15	1.8	1.8
16	5.0	5.0
17		
18		
19		
20		

26	2.2	3.6	1.5
27	4.2	5.0	3.6
28	3.1	5.0	2.4
29	0.2	3.2	3.2
30	3.2	5.0	2.6
32	2.2	3.5	1.6
33	4.2	5.0	3.5
35	2.3	0	3.0
36	2.4	0	3.1
37	4.2	5.0	5.1
38	4.3	5.0	5.1

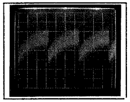
7	2.4	27	5.0	47	2.4	67	1.8
8	2.3	28	0	48	2.5	68	1.7
9	2.4	29	5.0	49	2.4	69	0
10	2.6	30	2.6	50	3.2	70	3.8
11	3.0	31	2.8	51	1.5	71	1.2
12	0	32	2.9	52	5.0	72	1.2
13	1.9	33	2.3	53	0	73	1.5
14	2.0	34	2.3	54	5.0	74	3.2
15	2.1	35	2.4	55	1.2	75	2.4
16	0	36	2.6	56	1.2	76	2.5
17	5.0	37	2.9	57	3.8	77	5.0
18	1.7	38	0	58	0	78	0
19	1.7	39	2.4	59	2.9	79	5.0
20	1.8	40	0	60	0.9	80	2.4

	IC2	IC6	IC14	IC48	IC53	IC54	IC72	IC73
Pin 1	5.0	1.6	1.6	5.1	-	-	5.1	5.1
2	0	1.6	1.6	0.7	2.6	2.6	2.5	0.1
3	11.8	1.6	0.5	0	0	0	0	0
4		0	0	0.8	2.6	2.6	0.1	0.1
5		3.6	3.5	5.1	5.1	5.1	5.1	5.1
6		3.6	3.5					
7		3.6	3.5					
8		5.0	5.0					

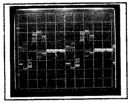
6. 20 µsec/DIV. 50mV/DIV



7. 20 µsec/DIV. 0.1V/DIV



8. 10 µsec/DIV. 0.5V/DIV



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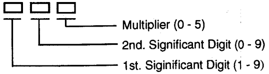
Digital Board (2/3)

IC1	B2
IC2	G2
IC3	B4
IC4	C2
IC5	C4
IC6	D3/E3
IC7	C7
IC8	G3
IC9	H2
IC10	E6
IC11	E6
IC12	E6
IC13	H3
IC14	I2/J2
IC15	G5
IC16	E7
IC18	E7
IC21	E7
IC22	H5
IC24	I5
IC25	H7
IC27	I6
IC29	J6
IC31	J6
IC33	J8
IC34	J8
IC36	J8
IC48	A7
IC53	B6
IC54	G6
IC72	A7
IC73	F7
Q15	B6
Q16	F7
Q22	B3
Q23	C3
Q24	D3
Q25	D3
Q26	D3
Q27	E3
Q28	G2
Q29	H2
Q30	H2
Q31	I2
Q32	I2
Q33	J2
Q35	B2
Q36	G2
Q37	D6
Q38	I6
D3	B6
D5	G6
D18	A7
D19	F7

Note: The value indicated in schematic diagram should be read as follows:

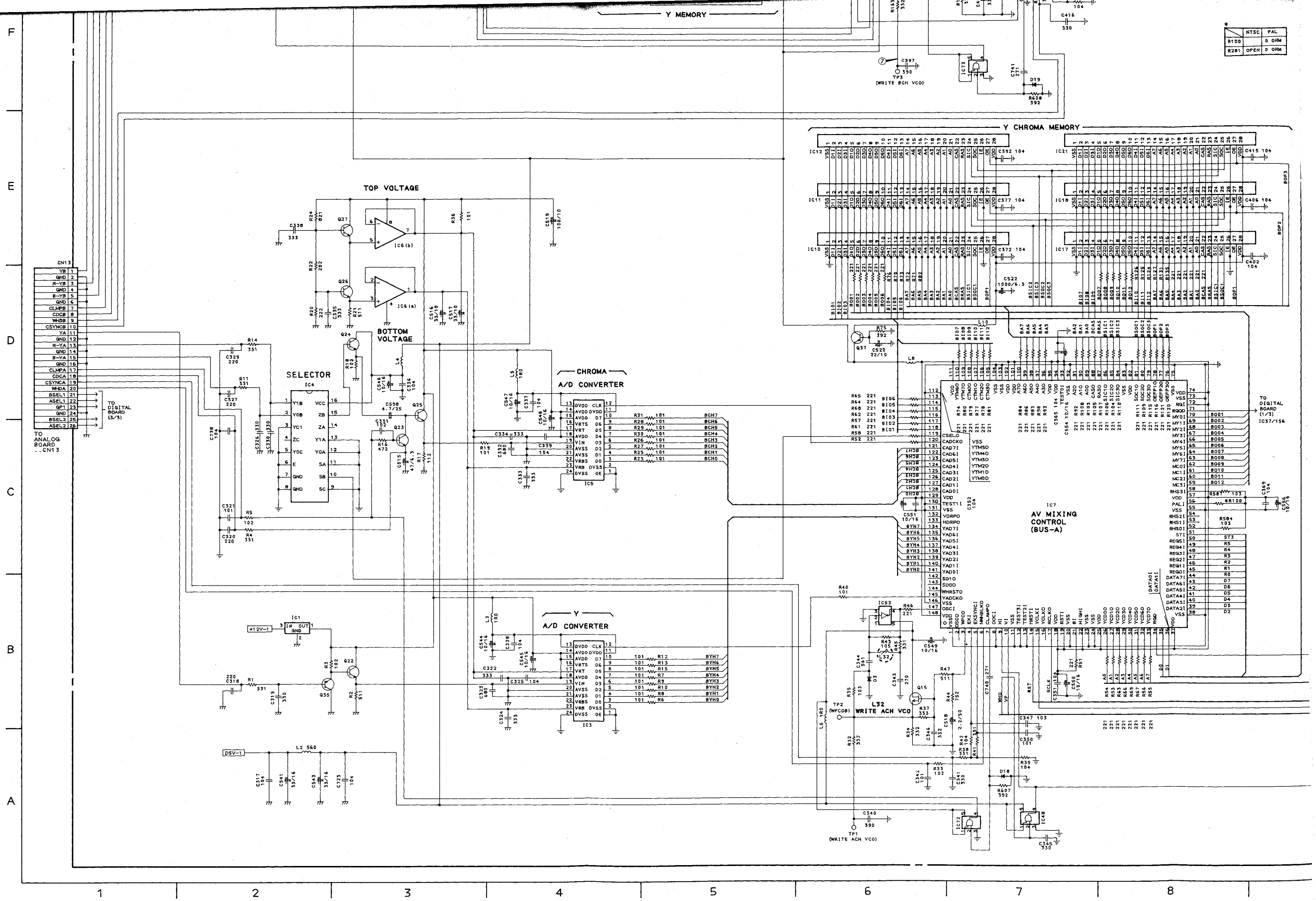

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:
$330 \longrightarrow 33 \times 10^0 = 33\Omega$
$561 \longrightarrow 56 \times 10^1 = 560\Omega$
$123 \longrightarrow 12 \times 10^3 = 12k\Omega$

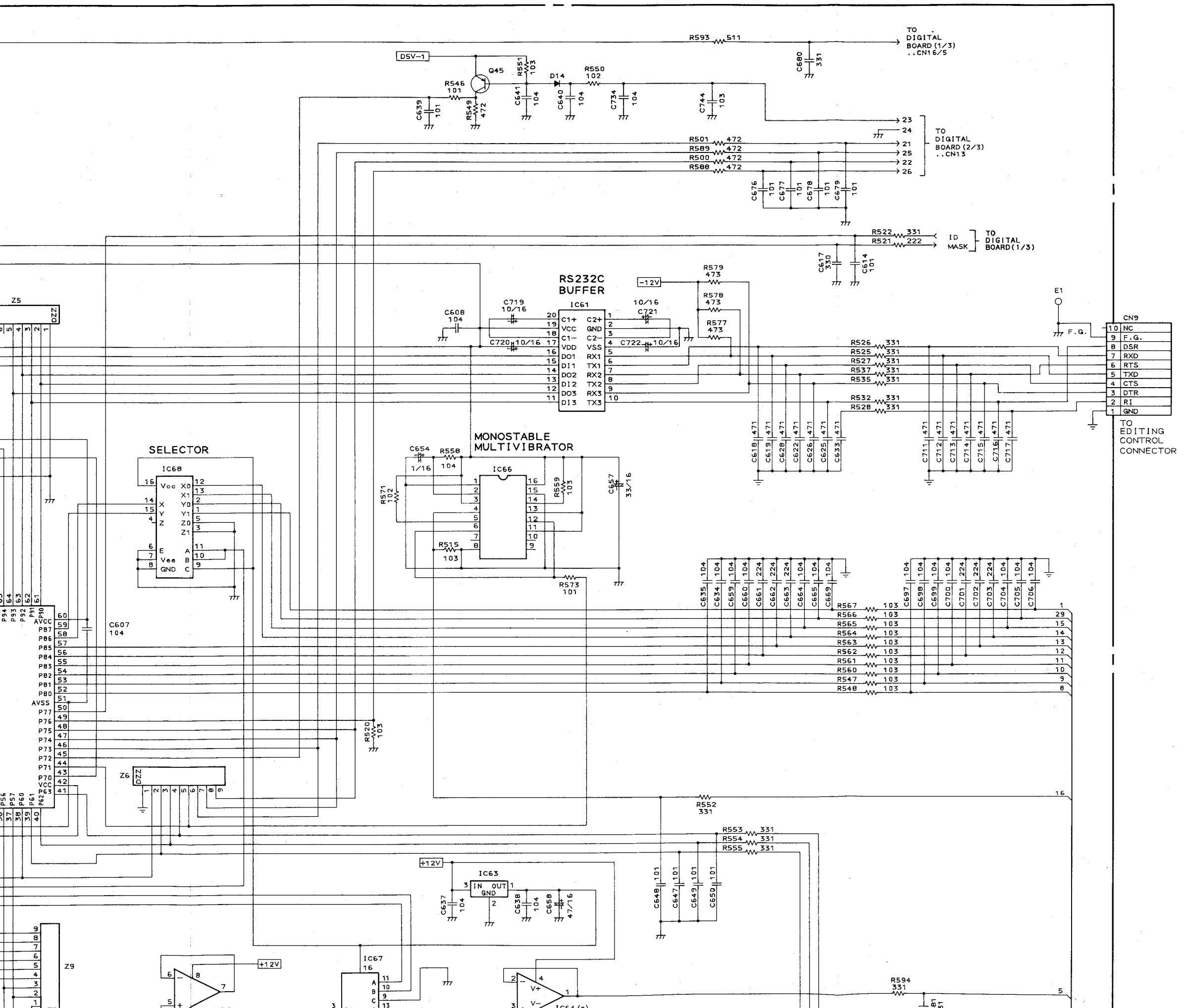
For Capacitor:
$820 \longrightarrow 82 \times 10^0 = 82pF$
$102 \longrightarrow 10 \times 10^2 = 1000pF = 0.001\mu F$
$104 \longrightarrow 10 \times 10^4 = 100000pF = 0.1\mu F$

The suffix attached to capacitance indicates a type of capacitor.


F
E
D
C
B
A
1
2
3
4
5
6
7
8
Y MEMORY
Y CHROMA MEMORY
TOP VOLTAGE
BOTTOM VOLTAGE
SELECTOR
IC4
IC6(b)
IC6(a)
CHROMA
A/D CONVERTER
IC5
Y
A/D CONVERTER
IC3
IC1
+12V-1
DSV-1
L2 560
CN13
YB
GND
R-YB
B-YB
CLMPB
CDCB
WHDB
CSYNCB
YA
R-YA
B-YA
CLMPA
CDCA
CSYNCA
WHDA
BSEL1
ASEL1
GP1
ASEL2
BSEL2
TO ANALOG BOARD ..CN13
TO DIGITAL BOARD (3/3)
TO DIGITAL BOARD (1/3) IC37/156
IC7
AV MIXING CONTROL (BUS-A)
IC12
IC11
IC10
IC21
IC18
IC17
IC53
IC72
IC73
IC48
L32
WRITE ACH VCO
TP1 (WRITE ACH VCO)
TP2 (WPC08)
TP3 (WRITE BCH VCO)
Q15
Q22
Q23
Q24
Q25
Q26
Q27
Q35
Q37

*	NTSC	PAL
R100		0 OHM
R281	OPEN	0 OHM

MATIC DIAGRAM OF DIGITAL BOARD (3/3)



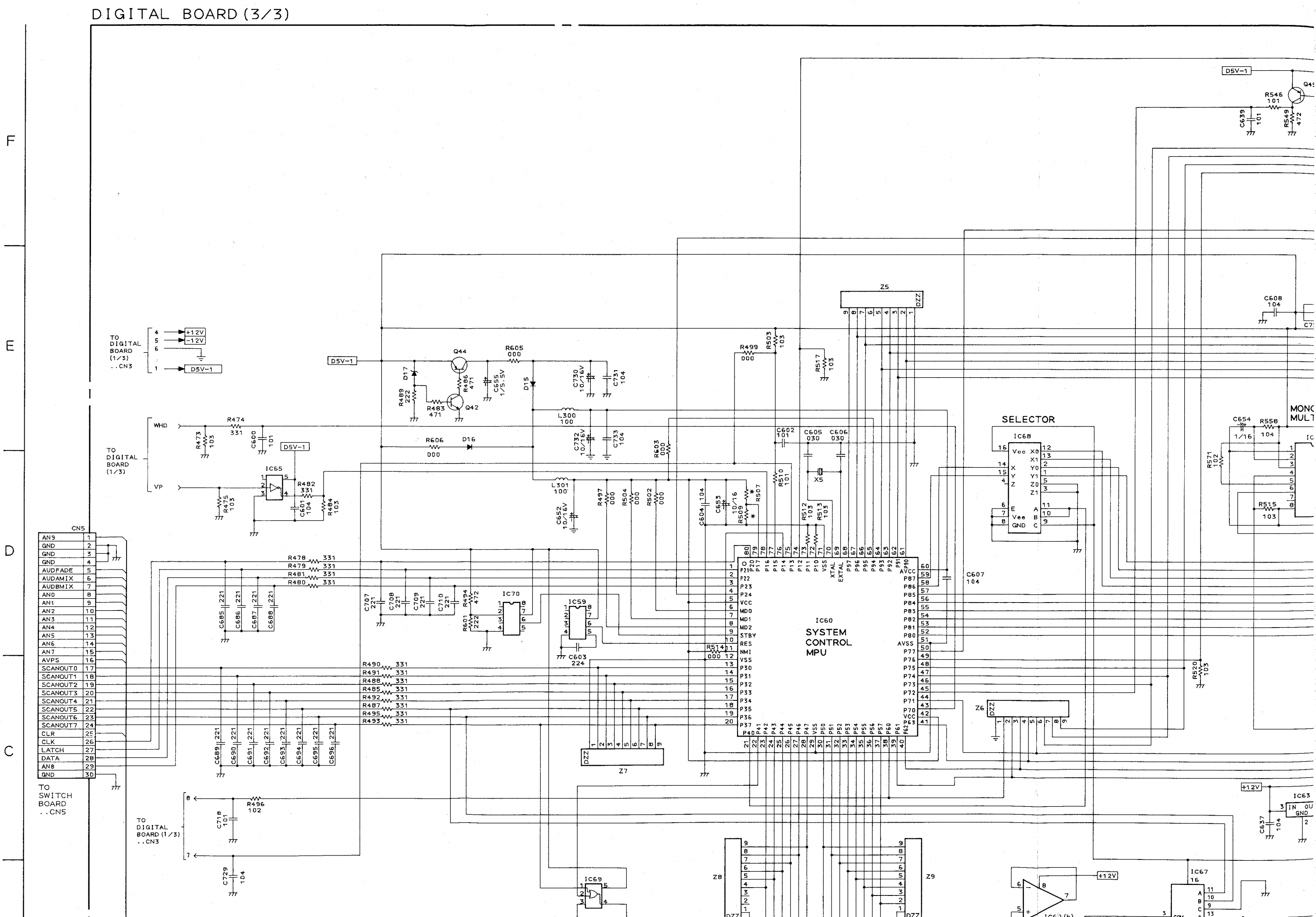
DSV-1
Q45
R546 101
R549 472
R551 103
D14
R550 102
C639 101
C641 104
C640 104
C734 104
C744 103
R593 511
C680 331
TO DIGITAL BOARD (1/3) ..CN16/5
TO DIGITAL BOARD (2/3) ..CN13
23
24
21
25
22
26
R501 472
R589 472
R500 472
R588 472
C676 101
C677 101
C678 101
C679 101
R522 331
R521 222
ID
MASK
TO DIGITAL BOARD(1/3)
C617 330
C614 101
RS232C BUFFER
IC61
C608 104
C719 10/16
C720 10/16
C721 10/16
C722 10/16
-12V
R579 473
R578 473
R577 473
C1+
VCC
C1−
VDD
DO1
DI1
DO2
DI2
DO3
DI3
C2+
GND
C2−
VSS
RX1
TX1
RX2
TX2
RX3
TX3
E1
F.G.
CN9
NC
F.G.
DSR
RXD
RTS
TXD
CTS
DTR
RI
GND
R526 331
R525 331
R527 331
R537 331
R535 331
R532 331
R528 331
C618 471
C619 471
C620 471
C622 471
C626 471
C625 471
C633 471
C711 471
C712 471
C713 471
C714 471
C715 471
C716 471
C717 471
TO EDITING CONTROL CONNECTOR
Z5
DZZ
SELECTOR
IC68
Vcc
X
Y
Z
E
Vee
GND
X0
X1
Y0
Y1
Z0
Z1
A
B
C
MONOSTABLE MULTIVIBRATOR
IC66
C654 1/16
R558 104
R571 102
R559 103
C657 33/16
R515 103
R573 101
C607 104
AVCC
P87
P86
P85
P84
P83
P82
P81
P80
AVSS
P77
P76
P75
P74
P73
P72
P71
P70
VCC
P63
P62
P61
P60
P57
P56
P90
P91
P92
P93
P94
R520 103
Z6
DZZ
C635 104
C634 104
C659 104
C660 104
C661 224
C662 224
C663 224
C664 104
C665 104
C669 104
C697 104
C698 104
C699 104
C700 104
C701 224
C702 224
C703 224
C704 104
C705 104
C706 104
R567 103
R566 103
R565 103
R564 103
R563 103
R562 103
R561 103
R560 103
R547 103
R548 103
R552 331
R553 331
R554 331
R555 331
C648 101
C647 101
C649 101
C650 101
+12V
IC63
IN
OUT
GND
C637 104
C638 104
C658 47/16
Z9
IC67
IC64
V+
V−
R594 331

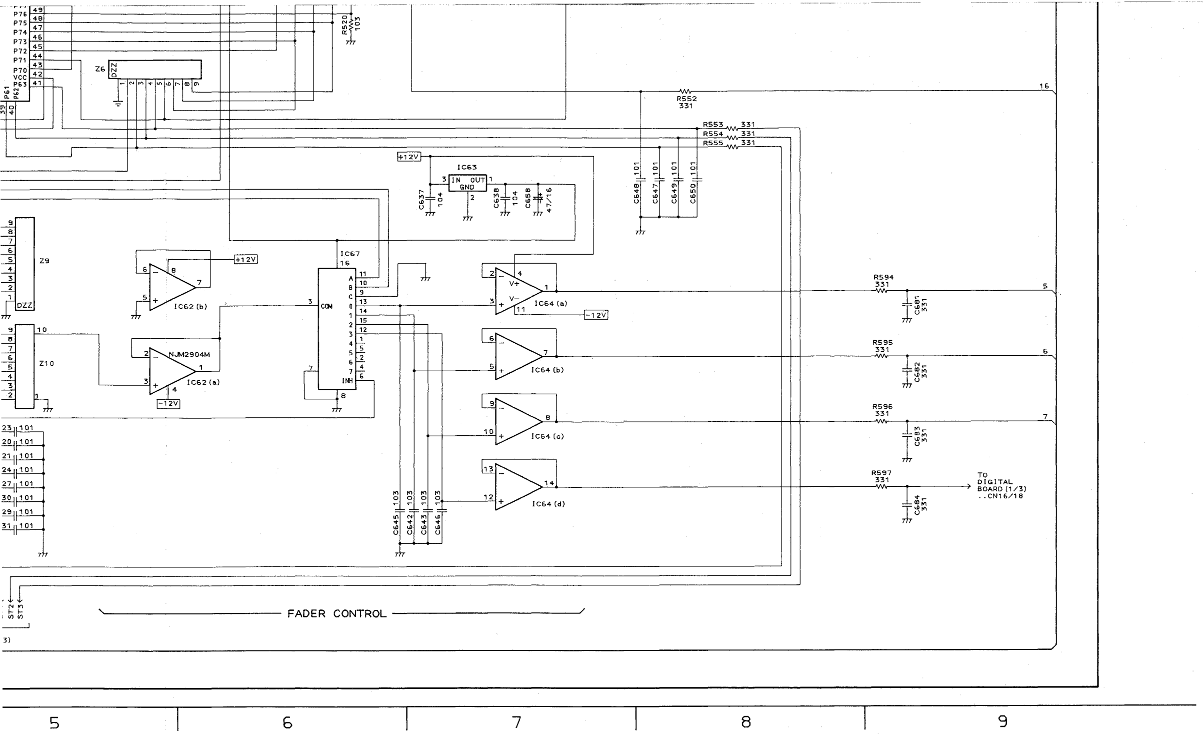
<Index>

Digital Board (3/3)

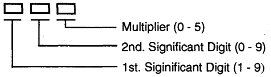
IC59	D3
IC60	D4
IC61	E7
IC62	B6
IC63	C7
IC64	A7/B7
IC65	D2
IC66	D6
IC67	B6
IC68	D5
IC69	B3
IC70	D3
Q14	E3
Q15	E3
Q16	F7
Q14	F7
D15	E3
D16	E3
D17	E2

SCHEMATIC DIAGRAM OF DIGITAL BOARD (3/3)


DIGITAL BOARD (3/3)
F
E
D
C
TO DIGITAL BOARD (1/3) ..CN3
+12V
-12V
D5V-1
TO DIGITAL BOARD (1/3)
WHD
VP
R474 331
R473 103
C600 101
IC65
R482 331
R484 103
C601 104
R475 103
Q44
Q42
D17
R489 222
R483 471
R486 471
C655 1/5.5V
R605 000
D15
C730 10/16V
C731 104
L300 100
C732 10/16V
C733 104
R606 000
D16
L301 100
C652 10/16V
R497 000
R504 000
R502 000
R603 000
C604 104
C653 10/16
R509
R507
R499 000
R503 103
R517 103
R510 101
R512 103
R513 103
C602 101
C605 030
C606 030
X5
Z5
DZZ
CN5
AN9
GND
AUDFADE
AUDAMIX
AUDBMIX
AN0
AN1
AN2
AN3
AN4
AN5
AN6
AN7
AVPS
SCANOUT0
SCANOUT1
SCANOUT2
SCANOUT3
SCANOUT4
SCANOUT5
SCANOUT6
SCANOUT7
CLR
CLK
LATCH
DATA
AN8
TO SWITCH BOARD ..CN5
R478 331
R479 331
R481 331
R480 331
C685 221
C686 221
C687 221
C688 221
C707 221
C708 221
C709 221
C710 221
R494 472
R601 222
IC70
IC59
C603 224
R514 000
R490 331
R491 331
R488 331
R485 331
R492 331
R487 331
R495 331
R493 331
C689 221
C690 221
C691 221
C692 221
C693 221
C694 221
C695 221
C696 221
Z7
IC60
SYSTEM CONTROL MPU
AVCC
VCC
VSS
STBY
RES
NMI
MD0
MD1
MD2
XTAL
EXTAL
AVSS
C607 104
SELECTOR
IC68
Vcc
Vee
GND
Z6
TO DIGITAL BOARD (1/3) ..CN3
R496 102
C718 101
C729 104
IC69
Z8
Z9
R520 103
R546 101
R549 472
C639 101
C608 104
C654 1/16
R558 104
R571 102
R515 103
MONO MULT
+12V
IC63
IN
GND
C637 104
IC67


P76
P75
P74
P73
P72
P71
P70
VCC
P63
P61
P62
Z6
DZZ
R520
103
R552
331
R553 331
R554 331
R555 331
16
+12V
IC63
IN OUT
GND
C637 104
C638 104
C658 47/16
C648 101
C647 101
C649 101
C650 101
Z9
DZZ
Z10
IC62 (b)
NJM2904M
IC62 (a)
+12V
-12V
IC67
COM
INH
A
B
C
IC64 (a)
IC64 (b)
IC64 (c)
IC64 (d)
V+
V-
-12V
R594 331
R595 331
R596 331
R597 331
C681 331
C682 331
C683 331
C684 331
5
6
7
TO DIGITAL BOARD (1/3) ..CN16/18
C645 103
C642 103
C643 103
C646 103
ST2
ST3
FADER CONTROL
5
6
7
8
9

Note: The value indicated in schematic diagram should be read as follows:

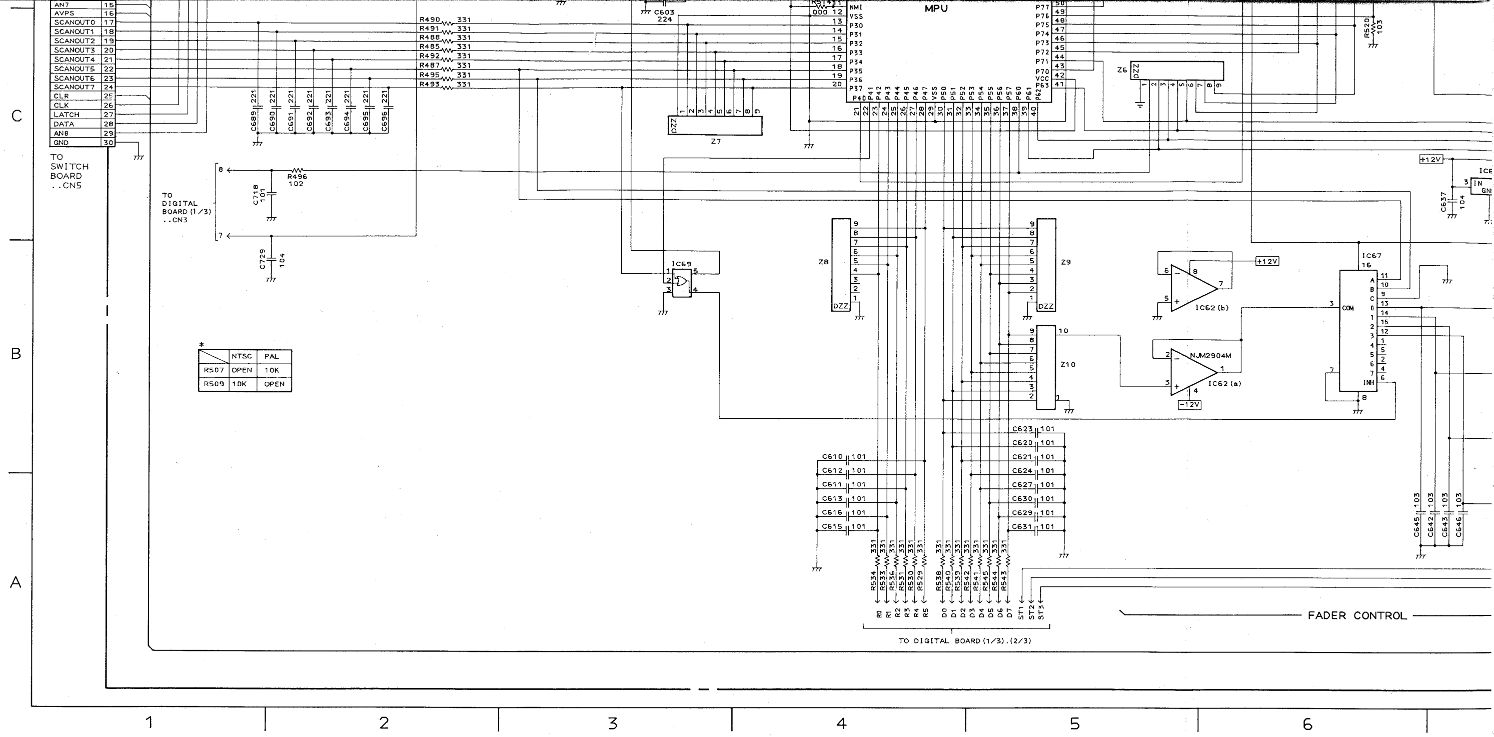

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:
330 → 33×10^0 = 33Ω
561 → 56×10^1 = 560Ω
123 → 12×10^3 = 12kΩ

For Capacitor:
820 → 82×10^0 = 82pF
102 → 10×10^2 = 1000pF = 0.001μF
104 → 10×10^4 = 100000pF = 0.1μF

The suffix attached to capacitance indicates a type of capacitor.


AN7
AVPS
SCANOUT0
SCANOUT1
SCANOUT2
SCANOUT3
SCANOUT4
SCANOUT5
SCANOUT6
SCANOUT7
CLR
CLK
LATCH
DATA
AN8
GND
TO SWITCH BOARD ..CN5
TO DIGITAL BOARD (1/3) ..CN3
R490 331
R491 331
R488 331
R485 331
R492 331
R487 331
R495 331
R493 331
C689 221
C690 221
C691 221
C692 221
C693 221
C694 221
C695 221
C696 221
R496 102
C718 101
C729 104
C603 224
MPU
NMI
VSS
P30
P31
P32
P33
P34
P35
P36
P37
P40
P41
P42
P43
P44
P45
P46
P47
VSS
P50
P51
P52
P53
P54
P55
P56
P57
P60
P61
P62
P77
P76
P75
P74
P73
P72
P71
P70
VCC
P63
Z6
Z7
Z8
Z9
Z10
DZZ
IC69
R520 103
+12V
-12V
IC62 (b)
IC62 (a)
NJM2904M
IC67
COM
INH
C637 104
C623 101
C620 101
C621 101
C624 101
C627 101
C630 101
C629 101
C631 101
C610 101
C612 101
C611 101
C613 101
C616 101
C615 101
C645 103
C642 103
C643 103
C646 103
R534 331
R533 331
R536 331
R531 331
R530 331
R529 331
R538 331
R540 331
R539 331
R542 331
R541 331
R545 331
R544 331
R543 331
R0
R1
R2
R3
R4
R5
D0
D1
D2
D3
D4
D5
D6
D7
ST1
ST2
ST3
TO DIGITAL BOARD (1/3),(2/3)
FADER CONTROL
A
B
C
1
2
3
4
5
6

*	NTSC	PAL
R507	OPEN	10K
R509	10K	OPEN

DIGITAL BOARD

	IC60		IC60		IC60		IC60
Pin 1	0	Pin 21	0.6	Pin 41	0	Pin 61	0
2	0	22	4.6	42	4.9	62	0
3	4.9	23	4.6	43	0.7	63	4.8
4	0.8	24	4.6	44	0	64	4.8
5	4.9	25	0.1	45	0	65	0.7
6	4.9	26	0.1	46	0	66	4.7
7	4.9	27	4.6	47	4.8	67	4.8
8	4.9	28	3.8	48	0	68	4.8
9	4.9	29	0	49	4.8	69	2.2
10	4.9	30	0.1	50	4.9	70	2.2
11	0	31	0.1	51	0	71	0
12	0	32	0.1	52	1.6	72	0
13	0	33	0.1	53	1.4	73	0
14	0	34	0.1	54	2.4	74	0
15	0	35	0.1	55	2.7	75	0.6
16	0	36	0.1	56	0	76	4.9
17	0	37	0.1	57	1.1	77	5.0
18	0.1	38	4.8	58	4.4	78	4.9
19	0.1	39	0	59	0.4	79	5.0
20	4.6	40	0	60	4.9	80	0

	IC61	IC64	IC65	IC67	IC68
Pin 1	4.8	3.6	0	1.3	2.7
2	0	3.6	5.1	0.8	0
3	-5.0	3.3	5.1	0.1	0
4	-9.9	4.9	0	-	0
5	-1.4	0	5.1	-	0
6	-9.2	0	0	4.7	0
7	-1.4	0	5.1	0	0
8	9.9	0	0	0	0
9	0	0	0	0	4.9
10	4.9	0	5.1	0.1	0.6
11	0	-12.0	5.1	0.1	0.6
12	0.6	0.8	0	0.1	2.2
13	0	0	0.6	2.9	0.7
14	0.6	0	0.6	0.1	2.0
15	4.7		0	0.6	0.3
16	4.9		5.1	4.9	4.9
17	9.9				
18	2.4				
19	5.0				
20	7.4				

	IC59	IC62	IC65	IC69	IC70
Pin 1	0.5	0.1	-	4.6	-
2	2.5	0.1	0	4.6	1.7
3	0.7	0.2	0	0	0.1
4	0	-12.0	5.1	4.7	0
5	1.2	0	5.1	5.0	-
6	0	0			5.1
7	5.2	0			5.2
8	0.9	11.8			-

	B	C	E
Q42	2.6	4.3	1.9
44	4.3	5.0	5.1
45	5.1	0	5.1

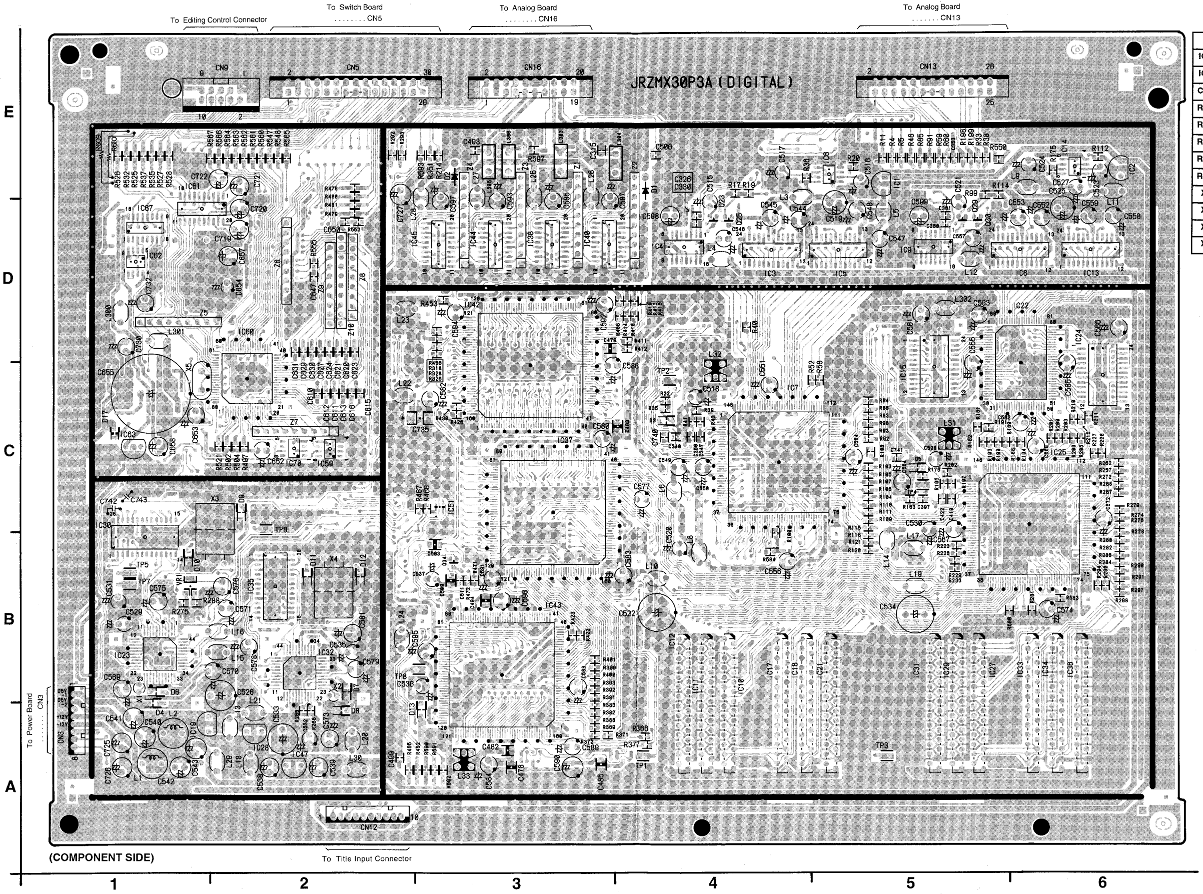
COMPONENT SIDE

<Index>

Digital Board
(Compnent Side)

IC1	E5
IC2	E6
IC3	D4
IC4	D4
IC5	D4/D5
IC6	E5
IC7	C4
IC8	D5/D6
IC9	D5
IC10	A4/B4
IC11	A4/B4
IC12	A4/B4
IC13	D6
IC14	E6
IC15	C5/D5
IC17	A4/B4
IC18	A4/B4
IC19	A1
IC21	A5/B5
IC22	C5-6/D5-6
IC23	B1
IC24	C6/D6
IC25	B5-6/C5-6
IC27	A5/B5
IC28	A2
IC29	A5/B5
IC30	C1
IC31	A5/B5
IC32	B2
IC33	A6/B6
IC34	A6/B6
IC35	B2
IC36	A6/B6
IC37	B3/C3
IC38	D3
IC40	D3
IC42	C3/D3
IC43	A3
IC44	D3
IC45	D3
IC47	A2
IC51	C3
IC59	C2
IC60	C2
IC61	D1-2
IC62	D1
IC63	C1
IC67	D1
IC70	C2
Q23	D4
Q25	D4
Q29	D5
Q30	D5
Q34	B3
D1	E3
D2	E3
D3	E4
D4	B1
D5	C5
D6	B1
D7	B2
D8	B2
D9	C2
D10	B1
D11	B2
D12	B2
D13	A3
D17	C1

DIGITAL BOARD


To Editing Control Connector
To Switch Board CN5
To Analog Board CN16
To Analog Board CN13
CN9
CN5
CN16
CN13
JRZMX30P3A(DIGITAL)
To Power Board CN3
CN3
CN12
To Title Input Connector
(COMPONENT SIDE)
E
D
C
B
A
1
2
3
4
5
6

	NTSC	PAL
IC30	MN676011NPS	MN676021PPS
IC35	MN676011NPS	MN676021PPS
C532	2.2 μF 50V	3.3 μF 50V
R100	Open	0 Ω
R265	620 Ω	0 Ω
R266	620 Ω	0 Ω
R281	Open	0 Ω
R453	Open	0 Ω
X1	MS30914M10	MS30917M10
X2	MS30914M10	MS30917M10
X3	MS30914M10	N8R4R40625
X4	MS30914M10	N8R4R40625

CONDUCTOR VIEW OF DIGI

PATTERN

<Index>

Digital Board
(Pattern Side

IC26	B6
IC39	A3-4
IC41	A4
IC46	B6
IC48	D3
IC50	C5
IC52	B6
IC53	C3
IC54	C2
IC56	C6
IC57	B5
IC58	B5
IC64	E6
IC65	C6
IC66	D6
IC68	E5
IC69	C6
IC72	D3
IC73	C2
Q14	E3
Q15	C3
Q16	C2
Q17	B6
Q18	A5
Q19	B6
Q20	B5
Q21	A4
Q22	D3
Q24	D3
Q26	E2
Q27	E2
Q28	D2
Q31	D2
Q32	E1
Q33	E1
Q35	D3
Q36	E2
Q37	B3
Q38	B2
Q39	E4
Q40	E4
Q41	E4
Q42	C6
Q44	C6
Q45	D5
D14	D5
D15	C6
D16	C6
D18	D3
D19	C2
D17	C1

OR VIEW OF DIGITAL BOARD

NTSC	PAL
676011NPS	MN676021PPS
676011NPS	MN676021PPS
2 μF 50V	3.3 μF 50V
Open	0 Ω
620 Ω	0 Ω
620 Ω	0 Ω
Open	0 Ω
Open	0 Ω
30914M10	MS30917M10
30914M10	MS30917M10
30914M10	N8R4R40625
30914M10	N8R4R40625

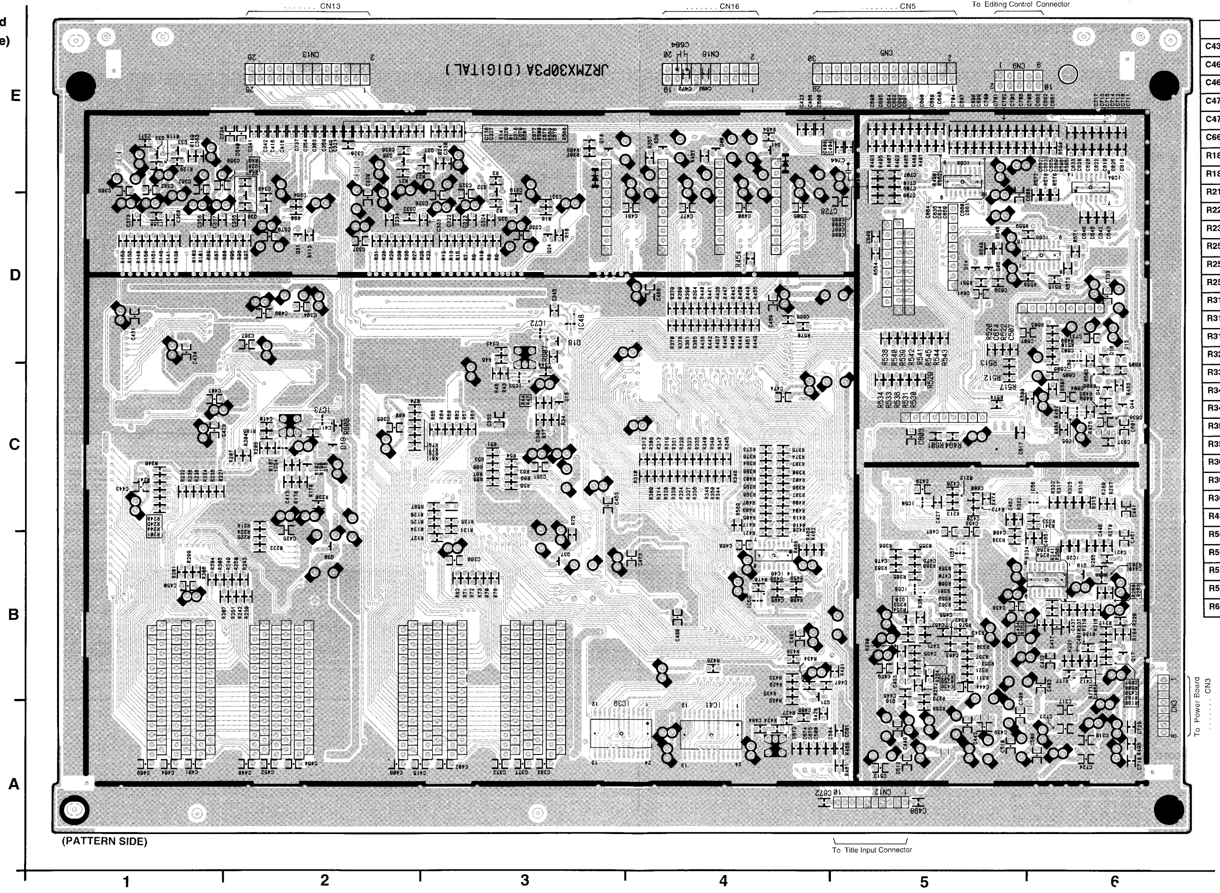
PATTERN SIDE

<Index>

Digital Board (Pattern Side)

IC26	B6
IC39	A3-4
IC41	A4
IC46	B6
IC48	D3
IC50	C5
IC52	B6
IC53	C3
IC54	C2
IC56	C6
IC57	B5
IC58	B5
IC64	E6
IC65	C6
IC66	D6
IC68	E5
IC69	C6
IC72	D3
IC73	C2
Q14	E3
Q15	C3
Q16	C2
Q17	B6
Q18	A5
Q19	B6
Q20	B5
Q21	A4
Q22	D3
Q24	D3
Q26	E2
Q27	E2
Q28	D2
Q31	D2
Q32	E1
Q33	E1
Q35	D3
Q36	E2
Q37	B3
Q38	B2
Q39	E4
Q40	E4
Q41	E4
Q42	C6
Q44	C6
Q45	D5
D14	D5
D15	C6
D16	C6
D18	D3
D19	C2
D17	C1

DIGITAL BOARD

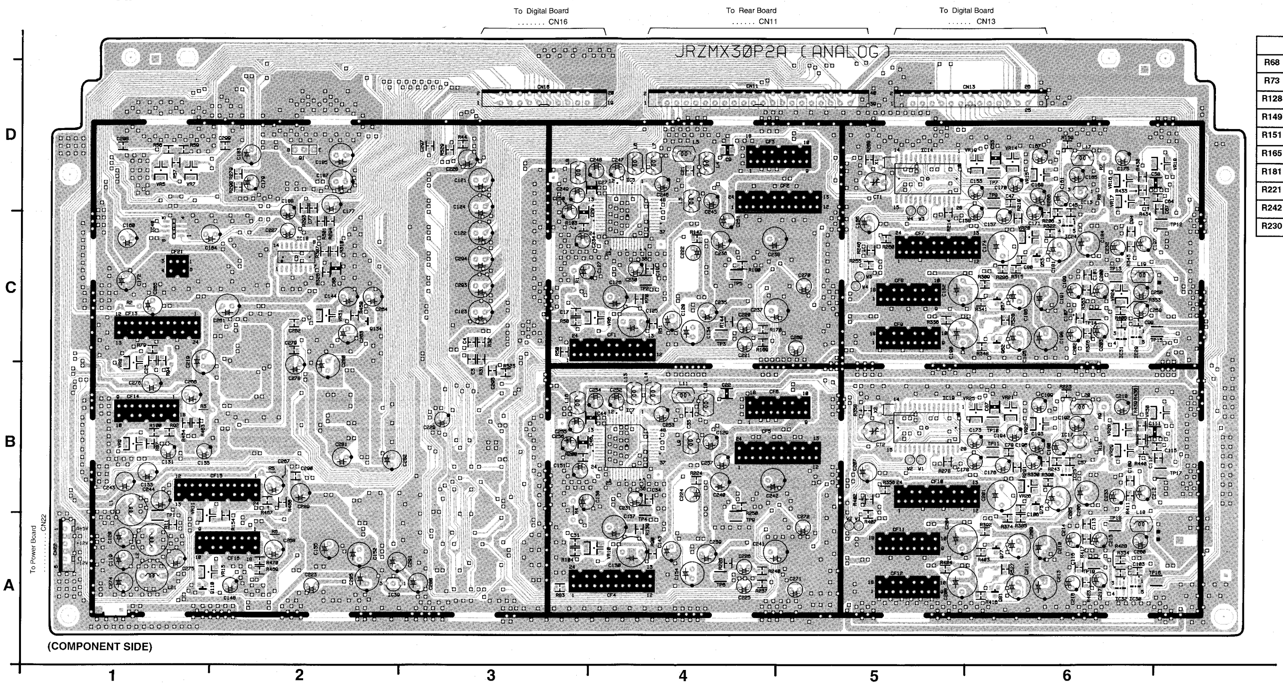

To Analog Board
.... CN13
To Analog Board
.... CN16
To Switch Board
.... CN5
To Editing Control Connector
JRZMX30P3A (DIGITAL)
CN13
CN16
CN5
CN9
CN12
CN3
To Power Board
.... CN3
To Title Input Connector
(PATTERN SIDE)
E
D
C
B
A
1
2
3
4
5
6

	NTSC	PAL
C430	0.1 μF	0.01 μF
C460	680 pF	100 pF
C465	680 pF	100 pF
C475	680 pF	100 pF
C476	680 pF	100 pF
C667	Open	100 pF
R183	10 Ω	330 Ω
R184	10 Ω	330 Ω
R217	10 kΩ	1 kΩ
R220	10 Ω	330 Ω
R237	Open	0 Ω
R253	0 Ω	Open
R254	Open	0 Ω
R258	1 kΩ	7.5 kΩ
R315	0 Ω	Open
R316	0 Ω	Open
R317	0 Ω	Open
R325	Open	0 Ω
R332	0 Ω	Open
R342	0 Ω	Open
R343	Open	0 Ω
R352	Open	0 Ω
R359	0 Ω	Open
R360	0 Ω	Open
R361	o Ω	Open
R362	0 Ω	Open
R439	Open	0 Ω
R507	Open	0 Ω
R509	10 kΩ	Open
R574	0 Ω	Open
R575	Open	0 Ω
R600	2 MΩ	Open

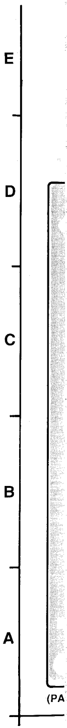
CONDUCTOR VIEW OF ANALO

COMPONENT SIDE

ANALOG BOARD


To Digital Board
.... CN16
To Rear Board
...... CN11
To Digital Board
...... CN13
JRZMX30P2A (ANALOG)
To Power Board
.... CN22
D
C
B
A
1
2
3
4
5
6
(COMPONENT SIDE)

	NTSC	PAL
R68	0 Ω	Open
R73	Open	0 Ω
R128	1.5 kΩ	1.3 kΩ
R149	Open	0 Ω
R151	0 kΩ	Open
R165	3.3 kΩ	2.7 kΩ
R181	820 Ω	1.2 kΩ
R221	1.5 kΩ	1.3 kΩ
R242	Open	0 Ω
R230	Open	0 Ω



<Index>
Analog Board
(Component Side)

IC5	C4/D4
IC7	B4
IC13	D6
IC14	D5
IC17	B6
IC18	C2
IC19	B5
IC24	D6
IC25	B6
IC29	C6
IC30	A6
IC31	C6
IC32	A6
IC39	A1
IC40	C1
Q1	D1
Q53	C6
Q57	C6
Q62	C6
Q75	B6
Q77	A6
Q81	A6
Q110	A1
Q134	C2

<Ind
Anal
(Patt

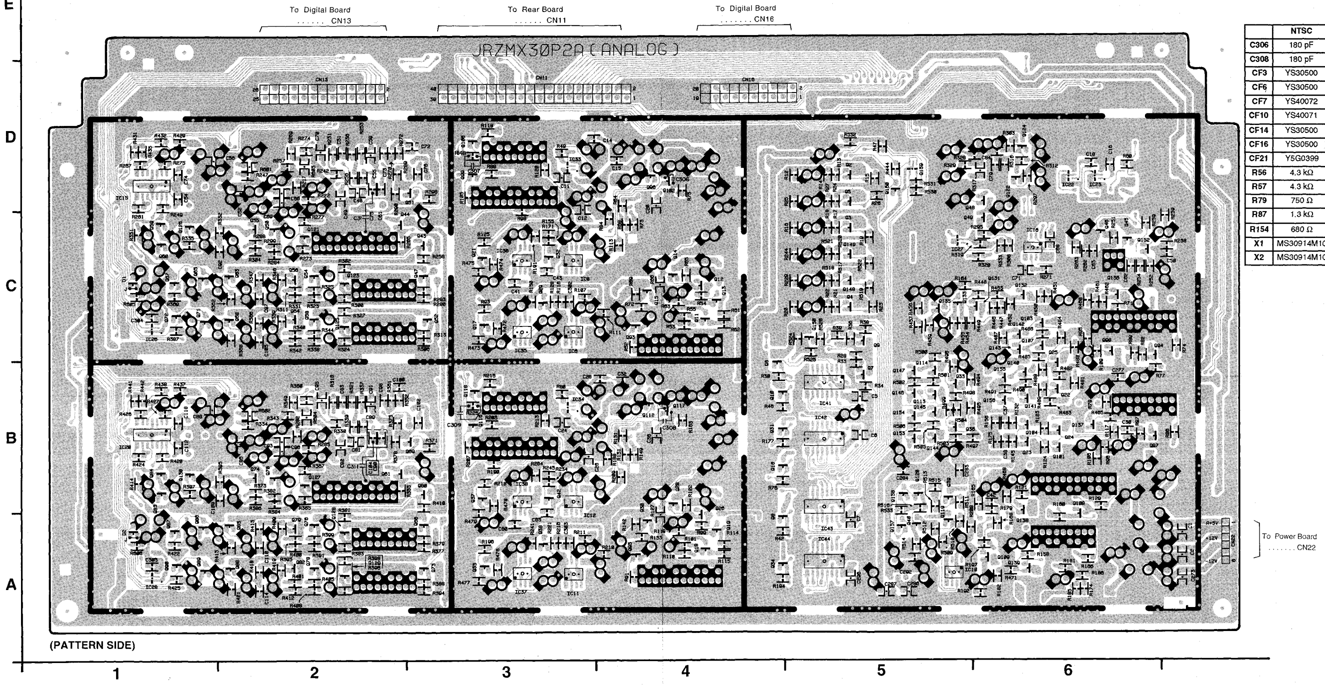
IC6
IC8
IC10
IC11
IC12
IC15
IC16
IC20
IC22
IC23

VIEW OF ANALOG BOARD

	NTSC	PAL
8	0 Ω	Open
3	Open	0 Ω
28	1.5 kΩ	1.3 kΩ
49	Open	0 Ω
51	0 kΩ	Open
65	3.3 kΩ	2.7 kΩ
81	820 Ω	1.2 kΩ
21	1.5 kΩ	1.3 kΩ
42	Open	0 Ω
30	Open	0 Ω

PATTERN SIDE

ANALOG BOARD


To Digital Board CN13
To Rear Board CN11
To Digital Board CN16
JRZMX30P2A (ANALOG)
To Power Board CN22
E
D
C
B
A
1
2
3
4
5
6

(PATTERN SIDE)

	NTSC	PAL
C306	180 pF	100 pF
C308	180 pF	100 pF
CF3	YS30500	YS30030
CF6	YS30500	YS30030
CF7	YS40072	YS40030
CF10	YS40071	YS40030
CF14	YS30500	YS30030
CF16	YS30500	YS30030
CF21	Y5G0399	Y5G0382
R56	4.3 kΩ	5.1 kΩ
R57	4.3 kΩ	5.1 kΩ
R79	750 Ω	680 Ω
R87	1.3 kΩ	1.5 kΩ
R154	680 Ω	750 Ω
X1	MS30914M10	MS30917M10
X2	MS30914M10	MS30917M10

<Index>

Analog board

(Pattern Side)

IC6	C3
IC8	C3
IC10	A5
IC11	A3
IC12	A3
IC15	C1
IC16	C6
IC20	B1
IC22	D6
IC23	D6
IC26	C1
IC27	C5
IC28	A1
IC33	D3
IC34	B3
IC35	C3
IC36	C3
IC37	A3
IC38	A3
IC41	B5
IC42	B5
IC43	B5
IC44	A5
Q2	D5
Q3	C5
Q4	C5
Q5	D5
Q6	B4
Q6	B4
Q7	B5
Q8	B4-5
Q9	C5
Q10	B4-5
Q11	C4
Q12	C4
Q13	C4
Q14	C4
Q15	C4
Q16	B4-5
Q17	C3
Q18	A4
Q19	A4
Q21	C3
Q22	B6
Q23	B6
Q24	B6
Q25	B6
Q26	A4
Q28	A4
Q29	C3
Q30	A4
Q31	B4-5
Q32	C3
Q33	B5
Q34	B4-5
Q35	A3
Q36	B5
Q37	A3
Q38	A3
Q39	B5
Q40	A5
Q42	B3
Q43	C3
Q44	C3
Q45	C6
Q46	C6
Q47	C3
Q48	C6
Q49	C6
Q50	C2
Q51	D3
Q52	C3
Q54	C2
Q55	C2
Q56	C2
Q58	C2
Q59	C1
Q60	C1
Q61	B2
Q62	C2
Q64	C2
Q65	C1
Q66	A3
Q67	C1
Q68	C2
Q69	B3
Q70	B2
Q71	C1
Q72	C1
Q73	A3
Q74	B2
Q76	A2
Q78	A2
Q79	A2
Q80	B3
Q82	A2
Q83	B1
Q84	B1
Q85	A2
Q86	A1
Q87	A1
Q88	A2
Q89	A1
Q90	A1
Q93	C4
Q94	C6
Q95	A4
Q96	D4
Q97	B6
Q98	C6
Q99	D3
Q101	B5
Q102	D4
Q103	C6
Q104	B6
Q106	D3
Q107	C6
Q108	A6
Q109	A6
Q112	B4
Q113	B5
Q114	B5
Q116	B3
Q117	B4
Q118	B3
Q119	A5
Q120	B5
Q121	C2
Q122	D6
Q123	C2
Q124	D6
Q125	C2
Q126	C1
Q127	B2
Q128	A2
Q129	A2
Q130	B1
Q131	C6
Q132	C6
Q133	C5
Q135	C5
Q136	C6
Q137	B6
Q138	A6
Q139	A6
Q140	B6
Q141	B6
Q142	C6
Q143	C6
Q144	B5
Q145	B5
Q146	B5
Q147	B5
Q148	C5
Q149	C5
Q150	C5
Q152	C6
Q153	B5
Q154	B5
Q155	B6
Q156	B6
Q157	A5
Q158	B5
Q159	D5
Q160	D5
D1	C1
D2	A1

SCHEMATIC DIAGRAM

ANALOG BOARD

	IC6	IC8	IC10	IC11	IC12	IC13	IC16	IC17	IC22	IC23	IC24	IC25	IC26	IC27
Pin 1	4.0	6.3	4.4	4.0	6.2	5.0	4.5	5.1	4.2	4.2	4.2	4.2	5.0	3.5
2	0	0	0	0	0	0	2.1	0	5.0	5.0	0.1	0.1	0.1	5.0
3	4.0	6.3	4.4	4.1	6.3	8.9	4.9	8.9	0	0	0	0	0	0
4	9.3	9.3	10.3	9.4	9.3		0		4.6	4.6	0	0	0	3.7
5	4.0	6.3	4.7	4.0	6.2		4.3		5.0	5.0	5.0	5.0	5.0	5.0
6	9.3	9.3	10.3	9.4	9.3		1.3							
7	3.3	4.4	4.8	3.3	4.3		1.4							
8	0	0	0	0	0		5.0							

	IC28	IC29	IC30	IC31	IC32	IC33	IC34	IC35	IC36	IC37	IC38	IC39	IC40
Pin 1	5.0	5.0	5.0	4.9	4.9	0.8	1.6	2.1	3.0	2.0	3.0	0	1.8
2	0.1	0	0	0.2	0.2	2.4	2.4	3.7	3.7	3.7	3.7	-11.9	0.6
3	0	0	0	0	0	0	0	2.1	2.9	2.0	2.9	-5.1	0
4	0	0	0	0.2	0.2	2.4	2.4	0	0	0	0		0
5	5.0	5.0	5.0	4.9	4.9	5.0	5.0	2.2	1.1	2.3	1.7		3.7
6								4.8	4.9	4.8	4.9		1.8
7								1.4	2.2	1.4	2.2		1.7
8								0	0	0	0		5.0

	IC15	IC18	IC20	IC41	IC42	IC43	IC44
Pin 1	3.2	-	3.2	2.5	2.5	3.7	3.7
2	3.2	-	3.2	2.4	2.4	5.0	5.0
3	3.2	0	3.2	2.5	2.5	3.7	3.7
4	5.1	2.1	5.1	0	0	0	0
5	2.5	2.4	2.5	2.4	2.4	5.0	5.0
6	2.5	0	2.5	0	0	0	0
7	2.5	0	2.5	0	0	0	0
8	2.5	0	2.4	0	0	0	0
9	2.5	-	2.4	0	0	0	0
10	2.5	-	2.4	0	0	0	0
11	0	11.8	0	0	0	0	0
12	2.2	3.2	2.1	2.4	2.5	2.5	2.5
13	2.2	1.9	2.1	2.4	2.4	2.5	2.5
14	2.2	-	2.1	2.5	2.5	2.5	2.5
15				2.5	2.5	2.5	2.5
16				5.0	5.0	5.0	5.0

	IC14	IC19
Pin 1	2.8	2.9
2	3.3	3.6
3	2.3	2.4
4	2.4	2.5
5	3.0	3.0
6	3.0	3.0
7	3.9	3.9
8	3.0	3.1
9	2.9	3.0
10	2.8	2.9
11	2.4	2.4
12	3.3	3.4
13	0.5	0.4
14	2.9	3.0
15	5.0	5.1
16	2.9	2.9
17	0	0
18	4.2	4.3
19	2.2	2.2
20	2.1	2.1
21	2.0	2.2
22	2.7	2.8
23	4.3	4.3
24	4.3	4.3
25	2.9	3.0
26	3.1	3.1
27	2.7	2.7
28	4.1	4.2

	IC5	IC7
Pin 1	0	0
2	4.9	4.9
3	0	0
4	0.9	0.9
5	1.5	1.5
6	0	0
7	4.9	4.9
8	1.0	1.0
9	0	0
10	1.2	1.2
11	0	0
12	4.9	4.9
13	4.6	4.6
14	1.5	1.5
15	2.9	2.9
16	2.9	2.9
17	2.9	2.9
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	4.9	4.9
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	4.9	4.9
45	2.1	2.1
46	0	0
47	0	0
48	4.9	4.9

Analog Board

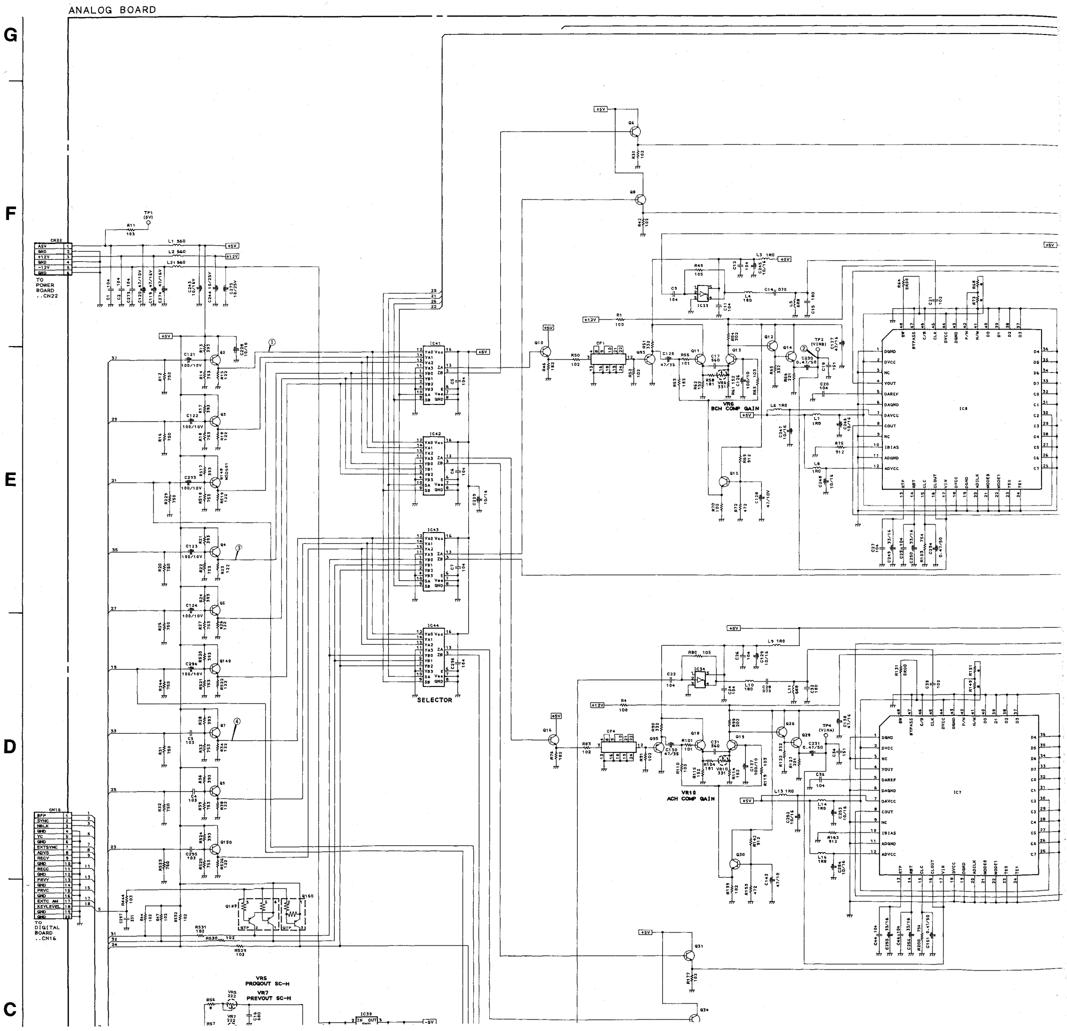
	B	C	E
Q1	7.9	0	8.6
2	3.1	5.0	2.5
3	3.1	5.0	2.5
4	3.1	5.0	2.5
5	3.1	5.0	2.4
6	2.5	5.0	1.8
7	3.1	5.0	2.5
8	2.5	5.0	1.9
9	3.1	5.0	2.5
10	2.5	5.0	1.8
11	3.1	5.0	2.4
12	6.3	11.1	5.7
13	3.1	6.3	2.4
14	5.7	11.1	5.1
15	3.8	11.1	3.1
16	2.5	5.0	1.8
17	2.4	5.0	1.7
18	3.1	5.0	2.4
19	3.0	6.2	2.4
21	2.4	5.0	1.8
22	2.0	5.0	1.4
23	3.1	5.0	2.5
24	2.5	5.0	1.9
25	2.1	-5.1	2.7

	B	C	E
Q45	2.4	5.0	1.8
46	2.3	5.0	1.7
47	2.1	5.0	1.5
48	0.1	2.8	2.7
49	2.7	5.0	2.1
50	3.1	5.0	2.4
51	3.6	5.0	2.9
52	2.1	5.0	1.5
53	3.1	6.5	2.5
54	3.0	5.0	2.4
55	6.5	11.4	5.9
56	6.3	11.4	5.7
57	3.0	6.3	2.4
58	3.0	5.0	2.4
59	2.2	4.9	1.6
60	0.1	2.2	2.2
61	1.5	5.0	0.9
62	3.0	6.5	2.4
63	5.7	11.4	5.1
64	6.5	11.4	5.7
65	0.1	2.5	2.5
66	2.2	5.0	1.5
67	2.5	4.9	1.8
68	5.9	11.4	5.2

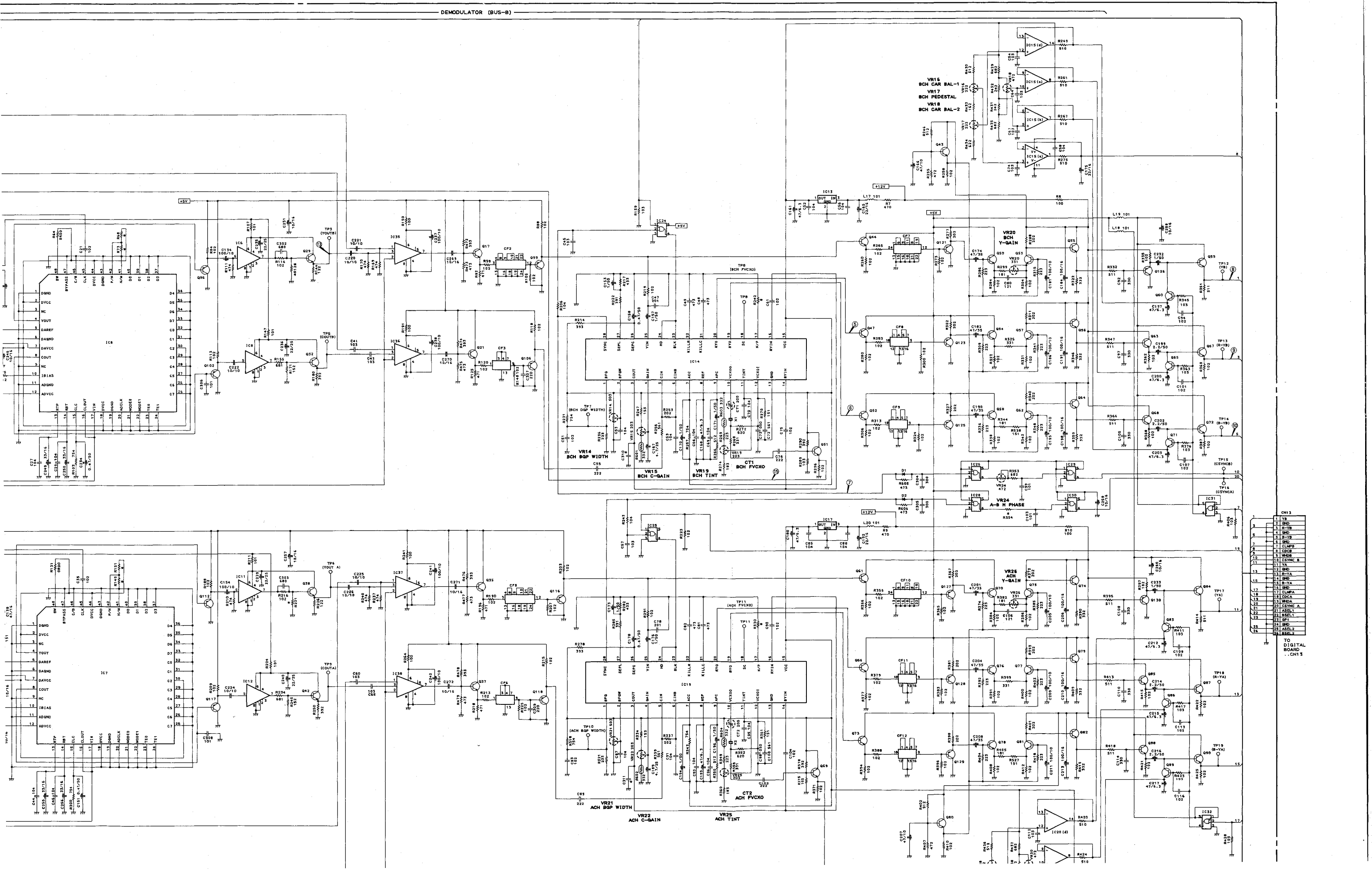
	B	C	E
Q85	6.1	11.4	5.4
86	0.1	2.4	2.4
87	2.4	4.9	1.8
88	6.0	11.4	5.4
89	0.1	2.5	2.5
90	2.5	4.9	1.9
93	0.9	0	1.5
94	1.5	0	2.1
95	0.9	0	1.5
96	0.4	11.1	1.0
97	2.5	0	3.1
98	2.4	0	3.0
99	0.9	0	1.5
101	2.5	0	3.1
102	0.1	0	1.6
103	2.7	5.0	2.1
104	1.9	0	2.6
106	0	0	0.7
107	1.4	-5.1	2.0
108	2.3	0	2.9
109	3.2	0	3.8
110	1.9	0	1.3
112	0.4	0	1.0
113	0.6	5.0	0

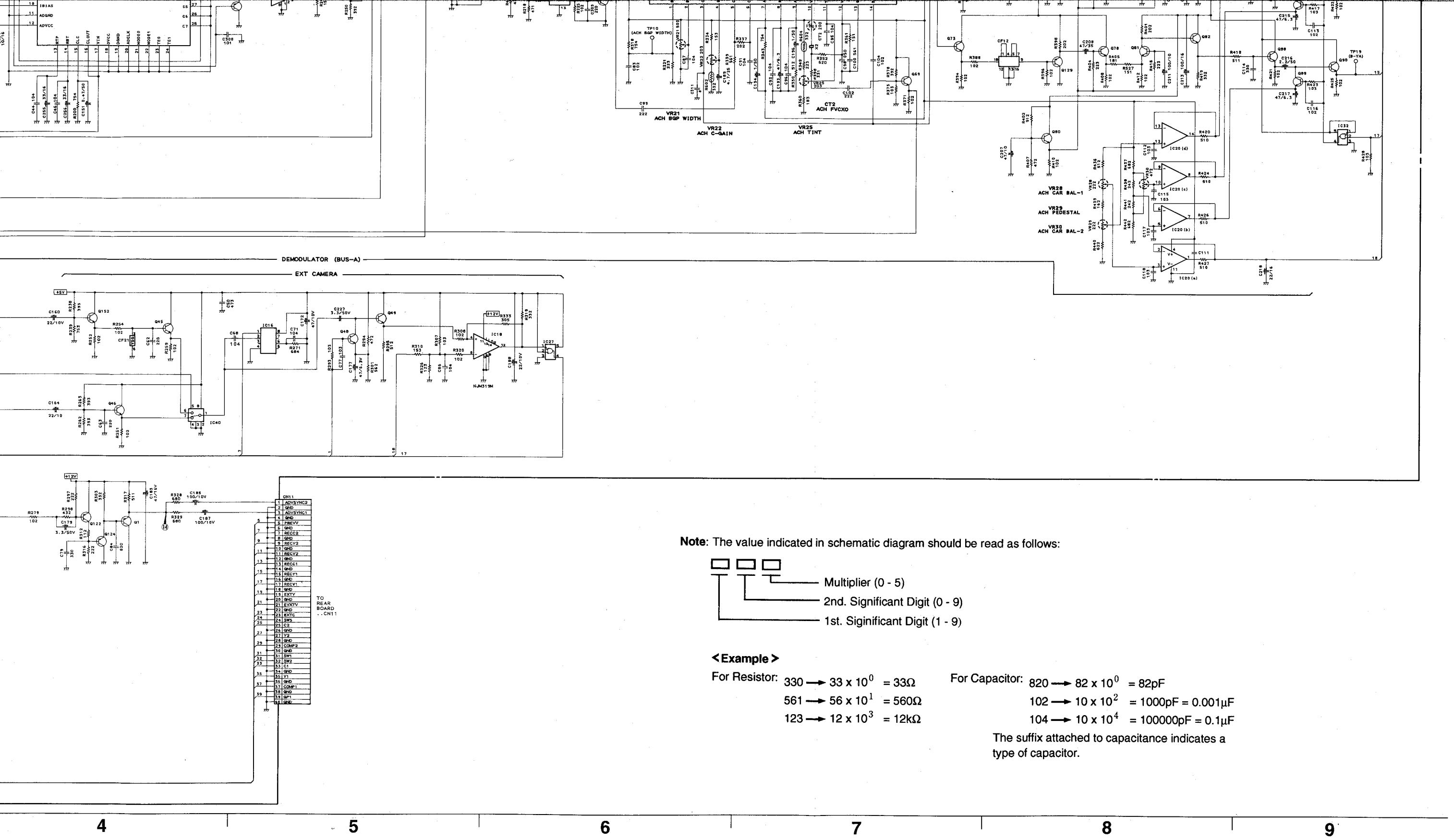
	B	C	E
Q131	4.1	5.0	3.6
132	4.1	5.0	3.5
133	4.1	6.8	3.5
134	4.8	10.7	4.2
135	6.8	10.7	6.4
136	3.9	11.8	3.3
137	5.6	11.8	5.4
138	5.5	11.8	4.9
139	5.6	11.8	5.0
140	2.7	5.0	2.1
141	1.4	-5.0	2.1
142	2.0	2.7	2.0
143	2.0	1.4	2.0
144	0.6	5.0	0
145	-0.6	-5.1	0
146	0	0.6	0
147	0	-0.6	0
148	3.1	5.0	2.5
149	3.1	5.0	2.5
150	3.1	5.0	2.5
152	3.1	5.0	2.4
153	0	0.6	0
154	0	-0.6	0
155	2.1	2.7	2.1

	Q159
1	5.0
2	3.7
3	5.0
4	5.0
5	5.0



EMATIC DIAGRAM OF ANALOG BOARD


DEMODULATOR (BUS-B)
+5V
IC5
IC6
IC8
IC35
IC36
IC14
IC13
IC15(d)
IC15(c)
IC15(b)
IC15(a)
IC24
IC26
IC27
IC28
IC29
IC30
IC31
IC7
IC11
IC12
IC37
IC38
IC19
IC17
IC25
IC20(d)
IC32
TP3 (YOUTB)
TP5 (COUTB)
TP6 (YOUT A)
TP9 (COUTA)
TP7 (BCH BGP WIDTH)
TP8 (BCH FVCXO)
TP10 (ACH BGP WIDTH)
TP11 (ACH FVCXO)
TP12 (YB)
TP13 (R-YB)
TP14 (B-YB)
TP15 (CSYNCB)
TP16 (CSYNCA)
TP17 (YA)
TP18 (R-YA)
TP19 (B-YA)
VR14 BCH BGP WIDTH
VR15 BCH C-GAIN
VR19 BCH TINT
CT1 BCH FVCXO
VR16 BCH CAR BAL-1
VR17 BCH PEDESTAL
VR18 BCH CAR BAL-2
VR20 BCH Y-GAIN
VR24 A-B H PHASE
VR26 ACH Y-GAIN
VR21 ACH BGP WIDTH
VR22 ACH C-GAIN
VR25 ACH TINT
CT2 ACH FVCXO
+12V
CN13
1 YB
2 GND
3 R-YB
4 GND
5 B-YB
6 GND
7 CLMPB
8 CDCB
9 WHDB
10 CSYNC B
11 YA
12 GND
13 R-YA
14 GND
15 B-YA
16 GND
17 CLMPA
18 CDCA
19 WHDA
20 CSYNC A
21 ASEL1
22 BSEL1
23 GP1
24 GND
25 ASEL2
26 BSEL2
TO DIGITAL BOARD ..CN13
DGND
DVCC
NC
YOUT
DAREF
DAGND
DAVCC
COUT
IBIAS
ADGND
ADVCC
BYPASS
C/B
CLK
DVCC
DGND
P/N
N/M
D0
D1
D2
D3
D4
D5
D6
D7
C0
C1
C2
C3
C4
C5
C6
C7
RTP
RBT
CLC
CLOUT
VIN
ADCLK
MODE1
TE0
TE1
SYNC
SEPL
SEPC
YIN
HD
BLK
KILLR
KILLC
RYO
BYO
SC
H/P
VCC
BFG
BFGW
COUT
GAIN
CIN
CINB
ACC
REF
APC
VCXO0
VCXOI
TINT
GND
BYIN
OUT
IN
GND


DEMODULATOR (BUS-A)
EXT CAMERA
TP10 (ACH BGP WIDTH)
VR21 ACH BGP WIDTH
VR22 ACH C-GAIN
VR25 ACH TINT
CT2 ACH FVCXO
TP19 (B-YA)
VR28 ACH CAR BAL-1
VR29 ACH PEDESTAL
VR30 ACH CAR BAL-2
IC20 (a)
IC20 (b)
IC20 (c)
IC20 (d)
IC32
IC16
IC18
IC27
IC40
NJM3119M
+5V
+12V
CN11
1 ADVSYNC2
2 GND
3 ADVSYNC1
4 GND
5 PREVV
6 GND
7 RECC2
8 GND
9 RECY2
10 GND
11 RECV2
12 GND
13 RECC1
14 GND
15 RECY1
16 GND
17 RECV1
18 GND
19 EXTY
20 GND
21 EVXTV
22 GND
23 EXTC
24 SW3
25 C2
26 GND
27 Y2
28 GND
29 COMP2
30 GND
31 SW1
32 SW2
33 C1
34 GND
35 Y1
36 GND
37 COMP1
38 GND
39 GP1
40 GND
TO REAR BOARD ..CN11
4
5
6
7
8
9

Note: The value indicated in schematic diagram should be read as follows:

□□□

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Siginificant Digit (1 - 9)

<Example>

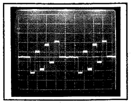
For Resistor:
330 ⟶ 33×10^0 = 33Ω
561 ⟶ 56×10^1 = 560Ω
123 ⟶ 12×10^3 = 12kΩ

For Capacitor:
820 ⟶ 82×10^0 = 82pF
102 ⟶ 10×10^2 = 1000pF = 0.001μF
104 ⟶ 10×10^4 = 100000pF = 0.1μF

The suffix attached to capacitance indicates a type of capacitor.

IV. 0.5V/DIV

10. 10 μsec/DIV. 0.5V/DIV



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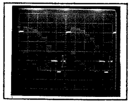

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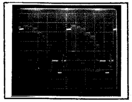

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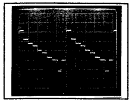

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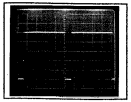

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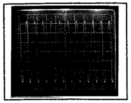
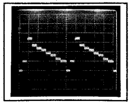


16. 10 μsec/DIV. 0.2V/DIV



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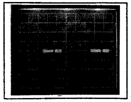


14	5.7	11.1	5.1
15	3.8	11.1	3.1
16	2.5	5.0	1.8
17	2.4	5.0	1.7
18	3.1	5.0	2.4
19	3.0	6.2	2.4
21	2.4	5.0	1.8
22	2.0	5.0	1.4
23	3.1	5.0	2.5
24	2.5	5.0	1.9
25	2.1	-5.1	2.7
26	6.2	11.1	5.6
28	5.6	11.1	5.0
29	1.9	9.3	1.3
30	3.7	11.1	3.1
31	2.5	5.0	1.8
32	1.8	9.3	1.2
33	0	5.0	-0.6
34	2.5	5.0	1.9
36	2.4	5.0	1.8
37	2.5	5.0	1.8
38	1.9	9.4	1.3
39	2.1	5.0	1.5
40	2.7	5.0	2.1
42	1.8	9.3	1.2
43	3.9	11.4	3.2
44	10.5	5.0	0.9

57	3.0	6.3	2.4
58	3.0	5.0	2.4
59	2.2	4.9	1.6
60	0.1	2.2	2.2
61	1.5	5.0	0.9
62	3.0	6.5	2.4
63	5.7	11.4	5.1
64	6.5	11.4	5.7
65	0.1	2.5	2.5
66	2.2	5.0	1.5
67	2.5	4.9	1.8
68	5.9	11.4	5.2
69	3.7	5.1	3.1
70	3.1	5.0	2.5
71	0.1	2.5	2.5
72	2.5	4.9	1.9
73	2.1	5.0	1.5
74	6.7	11.4	6.1
75	3.0	6.7	2.4
76	3.1	5.0	2.5
77	3.1	6.7	2.4
78	3.1	5.0	2.4
79	6.7	11.4	6.1
80	6.9	11.4	3.3
81	3.0	6.6	2.4
82	6.6	11.4	6.0
83	0	2.1	2.1
84	2.1	4.9	1.5

99	0.9	0	1.5
101	2.5	0	3.1
102	0.1	0	1.6
103	2.7	5.0	2.1
104	1.9	0	2.6
106	0	0	0.7
107	1.4	-5.1	2.0
108	2.3	0	2.9
109	3.2	0	3.8
110	1.9	0	1.3
112	0.4	0	1.0
113	0.6	5.0	0
114	-0.6	-5.1	0
116	0.9	0	1.5
117	1.0	0	1.6
118	0	0	0.7
119	2.1	-5.1	2.7
120	1.5	-5.1	2.1
121	0.5	0	1.1
122	11.1	11.1	11.8
123	0.7	0	1.4
124	7.4	0	7.9
125	0.8	0	1.4
126	5.9	0	6.6
127	0.5	0	1.1
128	0.8	0	1.4
129	0.8	0	1.4
130	6.1	0	6.7

143	2.0	1.4	2.0
144	0.6	5.0	0
145	-0.6	-5.1	0
146	0	0.6	0
147	0	-0.6	0
148	3.1	5.0	2.5
149	3.1	5.0	2.5
150	3.1	5.0	2.5
152	3.1	5.0	2.4
153	0	0.6	0
154	0	-0.6	0
155	2.1	2.7	2.1
156	2.1	1.4	2.1
157	2.1	2.7	2.1
158	2.1	1.5	2.1
160	5.0	5.0	5.0

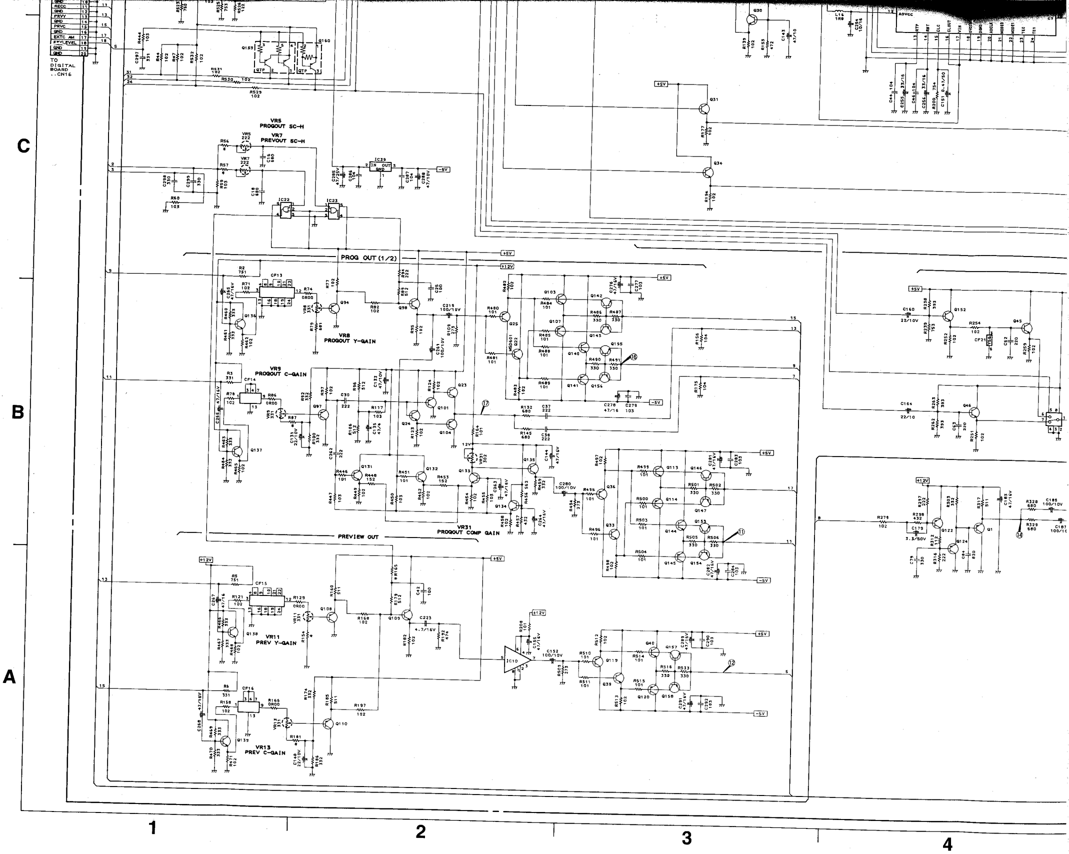
<Index>

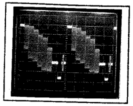
Analog Board

IC5	E4	Q4	E1	Q48	B5	Q89	C9	Q136	B1
IC6	F5	Q5	E1	Q49	B5	Q90	C9	Q137	B1
IC7	D4	Q6	F3	Q50	F8	Q93	E3	Q138	A1
IC8	E5	Q7	D1	Q51	E7	Q94	B1	Q139	A1
IC10	A2	Q8	F3	Q52	E7	Q95	D3	Q140	B3
IC11	D5	Q9	D1	Q53	F8	Q96	F4	Q141	B3
IC12	D5	Q10	E2	Q54	E8	Q97	B2	Q142	B3
IC13	F8	Q11	E3	Q55	F8	Q98	B1	Q143	B3
IC14	E7	Q12	E3	Q56	E8	Q99	F6	Q144	B3
IC15	F8/G8	Q13	E3	Q57	E8	Q101	B2	Q145	B3
IC16	B5	Q14	E3	Q58	E6	Q102	E5	Q146	B3
IC17	E7	Q15	E3	Q59	F9	Q103	B2	Q147	B3
IC18	B6	Q16	D2	Q60	E9	Q104	B2	Q148	E1
IC19	D7	Q17	F6	Q61	D7	Q106	E6	Q149	D1
IC20	C8	Q18	D3	Q62	E8	Q107	B2	Q150	D1
IC22	C1	Q19	D3	Q63	E9	Q108	A1	Q152	B4
IC23	C2	Q21	E6	Q64	E8	Q109	A3	Q153	B3
IC24	F7	Q22	B2	Q65	E9	Q110	A2	Q154	B3
IC25	D6	Q23	B2	Q66	D7	Q112	D4	Q155	B3
IC26	E8	Q24	B2	Q67	E9	Q113	B3	Q156	B3
IC27	B6	Q25	B2	Q68	E9	Q114	B3	Q157	A3
IC28	E8	Q26	D3	Q69	C7	Q116	D6	Q158	A3
IC29	E8	Q28	D3	Q70	D8	Q117	D5	Q159	C1
IC30	E8	Q29	F5	Q71	E9	Q118	D6	Q160	C1
IC31	E9	Q30	D3	Q72	E9	Q119	A3	D1	E8
IC32	E9	Q31	C3	Q73	D7	Q120	A3	D2	E8
IC33	F3	Q32	E5	Q74	D8	Q121	F8		
IC34	D3	Q33	B3	Q75	D8	Q122	B4		
IC35	F5	Q34	C3	Q76	D8	Q123	E8		
IC36	E5	Q35	D6	Q77	D8	Q124	B4		
IC37	D5	Q36	B3	Q78	C8	Q125	E8		
IC38	D5	Q37	D6	Q79	D8	Q126	F9		
IC39	C2	Q38	D5	Q80	C8	Q127	D8		
IC40	B4	Q39	A3	Q81	C8	Q128	D8		
IC41	E2	Q40	A3	Q82	D8	Q129	C8		
IC42	E2	Q42	D5	Q83	D9	Q130	D9		
IC43	E3	Q43	F8	Q84	D9	Q131	B2		
IC44	D2	Q44	F7	Q85	D9	Q132	B2		
Q1	B4	Q45	B4	Q86	D9	Q133	B2		
Q2	E1	Q46	B4	Q87	D9	Q134	B2		
Q3	E1	Q47	E7	Q88	C9	Q135	B2		

*

	NTSC	PAL
CF3	YS30500	YS30030
CF6	YS30500	YS30030
CF7	YS40072	YS40030
CF10	YS40031	YS40030
CF14	YS30500	YS30030
CF16	YS30500	YS30030
CF21	Y5Q0399	Y5Q0382
R56	4.3K OHMS	5.1K OHMS
R57	4.3K OHMS	5.1K OHMS
R68	0 OHM	OPEN
R73	OPEN	0 OHM
R79	750 OHMS	680 OHMS
R87	1.3K OHMS	1.5K OHMS
R128	1.5K OHMS	1.3K OHMS
R149	OPEN	0 OHM
R151	0 OHM	OPEN
R154	680 OHMS	750 OHMS
R165	3.3K OHMS	2.7K OHMS
R181	820 OHMS	1.2K OHMS
R221	1.5K OHMS	1.3K OHMS
R242	OPEN	0 OHM
R330	OPEN	0 OHM
R354	3.3K OHMS	5.6K OHMS
C310	OPEN	100PF
C311	OPEN	100PF
X1	MS30914M10	MS30917M10
X2	MS30914M10	MS30917M10

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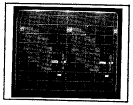
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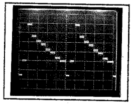
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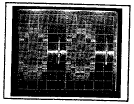
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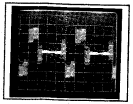
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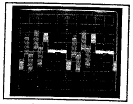
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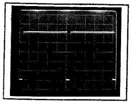
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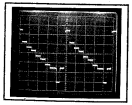
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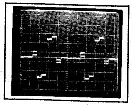
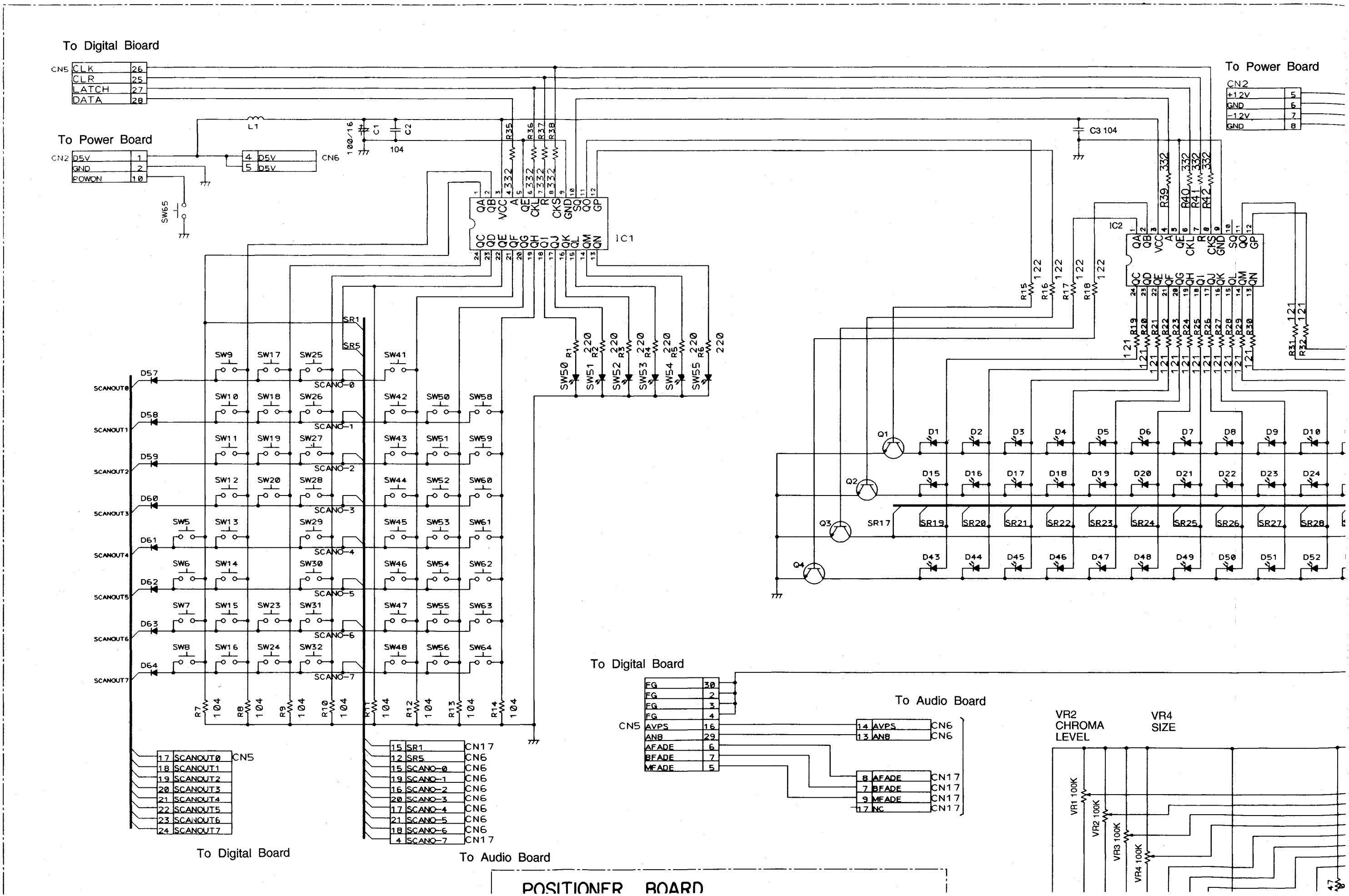

9. 10 µsec/DIV. 0.5V/DIV

SCHEMATIC DIAGRAM OF SWITCH BO

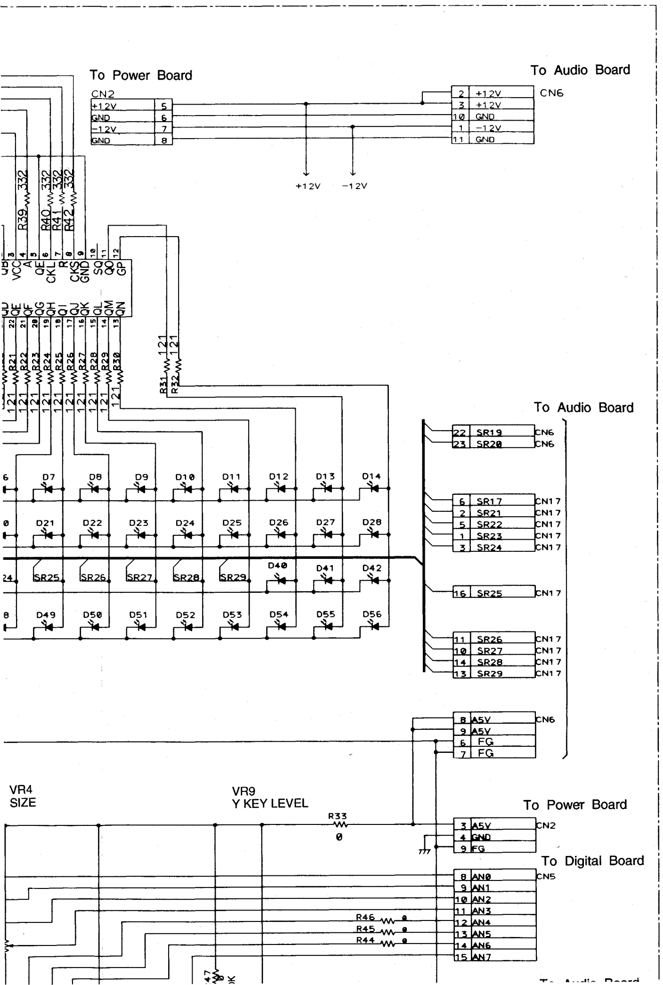
D

C

SWITCH BOARD


To Digital Bioard
CN5
CLK 26
CLR 25
LATCH 27
DATA 28
To Power Board
CN2
D5V 1
GND 2
POWON 10
SW65
L1
4 D5V
5 D5V
CN6
100/16
C1
C2
104
R35
R36
R37
R38
332
IC1
QA QB VCC A QE CKL R CKS GND SQ QO GP
QC QD QE QF QG QH QI QJ QK QL QM QN
C3 104
To Power Board
CN2
+12V 5
GND 6
-12V 7
GND 8
R39 332
R40 332
R41 332
R42 332
IC2
R15 122
R16 122
R17 122
R18 122
R19 … R30 121
R31 121
R32 121
SR1
SR5
R1 220
R2 220
R3 220
R4 220
R5 220
R6 220
SW50 SW51 SW52 SW53 SW54 SW55
SW5 SW6 SW7 SW8
SW9 SW10 SW11 SW12 SW13 SW14 SW15 SW16
SW17 SW18 SW19 SW20 SW23 SW24
SW25 SW26 SW27 SW28 SW29 SW30 SW31 SW32
SW41 SW42 SW43 SW44 SW45 SW46 SW47 SW48
SW50 SW51 SW52 SW53 SW54 SW55 SW56
SW58 SW59 SW60 SW61 SW62 SW63 SW64
SCANO-0 SCANO-1 SCANO-2 SCANO-3 SCANO-4 SCANO-5 SCANO-6 SCANO-7
D57 D58 D59 D60 D61 D62 D63 D64
SCANOUT0 SCANOUT1 SCANOUT2 SCANOUT3 SCANOUT4 SCANOUT5 SCANOUT6 SCANOUT7
R7 104
R8 104
R9 104
R10 104
R11 104
R12 104
R13 104
R14 104
17 SCANOUT0 CN5
18 SCANOUT1
19 SCANOUT2
20 SCANOUT3
21 SCANOUT4
22 SCANOUT5
23 SCANOUT6
24 SCANOUT7
To Digital Board
15 SR1 CN17
12 SR5 CN6
15 SCANO-0 CN6
19 SCANO-1 CN6
16 SCANO-2 CN6
20 SCANO-3 CN6
17 SCANO-4 CN6
21 SCANO-5 CN6
18 SCANO-6 CN6
4 SCANO-7 CN17
To Audio Board
Q1 Q2 Q3 Q4
D1 D2 D3 D4 D5 D6 D7 D8 D9 D10
D15 D16 D17 D18 D19 D20 D21 D22 D23 D24
SR17 SR19 SR20 SR21 SR22 SR23 SR24 SR25 SR26 SR27 SR28
D43 D44 D45 D46 D47 D48 D49 D50 D51 D52
To Digital Board
CN5
FG 30
FG 2
FG 3
FG 4
AVPS 16
AN8 29
AFADE 6
BFADE 7
MFADE 5
To Audio Board
14 AVPS CN6
13 AN8 CN6
8 AFADE CN17
7 BFADE CN17
9 MFADE CN17
17 NC CN17
VR2 CHROMA LEVEL
VR4 SIZE
VR1 100K
VR2 100K
VR3 100K
VR4 100K
POSITIONER BOARD

M OF SWITCH BOARD


To Power Board
CN2
+12V
GND
-12V
GND
To Audio Board
CN6
+12V
+12V
GND
-12V
GND
+12V
-12V
R39 332
R40 332
R41 332
R42 332
VCC
QE
CKL
R
CKS
GND
SO
QO
GP
QF
QG
QH
QI
QJ
QK
QL
QM
QN
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
121
R31 121
R32 121
D7
D8
D9
D10
D11
D12
D13
D14
D21
D22
D23
D24
D25
D26
D27
D28
SR25
SR26
SR27
SR28
SR29
D40
D41
D42
D49
D50
D51
D52
D53
D54
D55
D56
To Audio Board
SR19
SR20
CN6
SR17
SR21
SR22
SR23
SR24
CN17
SR25
SR26
SR27
SR28
SR29
A5V
A5V
FG
FG
VR4
SIZE
VR9
Y KEY LEVEL
R33
0
To Power Board
A5V
GND
FG
CN2
To Digital Board
CN5
AN0
AN1
AN2
AN3
AN4
AN5
AN6
AN7
R46
R45
R44

KEY SCAN MARTRIX

	SR1	SR2	SR3	SR4	SR5	SR6	SR7	SR8
P30	SW1 PROG OUT A	SW9 WIPE PATTERN 1	SW17 WIPE EDGE	SW25 DIGITAL EFFECT B	SW33 SUPER IMPOSE ON	SW41 B Y KEY	SW49 -	SW57 -
P31	SW2 PROG OUT B	SW10 WIPE PATTERN 2	SW18 MULTI	SW26 DIGITAL EFFECT NEGA	SW34 SUPER IMPOSE A	SW42 POSITION ON	SW50 SOURCE 1A	SW58 FADE CONTRO L VIDEO
P32	SW3 PROG OUT EFFECT	SW11 WIPE PATTERN 3	SW19 ONE-WAY	SW27 DIGITAL EFFECT MONO	SW35 SUPER IMPOSE B	SW43 COLOR CORREC T ON	SW51 SOURCE 2A	SW59 FADE CONTRO L TITLE
P33	SW4 -	SW12 WIPE PATTERN 4	SW20 REVERSE	SW28 DIGITAL EFFECT PAINT	SW36 SUPER IMPOSE EXT. CAMERA	SW44 COLOR CORREC T A	SW52 BACK COLOR A	SW60 FADE CONTRO L AUDIO
P34	SW5 BACK COLOR GRAD	SW13 WIPE PATTERN 5	SW21 -	SW29 DIGITAL EFFECT STROBE	SW37 SUPER IMPOSE REVERSE	SW45 COLOR CORREC T B	SW53 SOURCE 1B	SW61 FADE CONTRO L BACK COLOR
P35	SW6 BACK COLOR SELECT	SW14 WIPE PATTERN 6	SW22 -	SW30 DIGITAL EFFECT STILL	SW38 SUPER IMPOSE BACK COLOR	SW46 MIX	SW54 SOURCE 2B	SW62 FADE CONTRO L WHITE
P36	SW7 STORE	SW15 WIPE PATTERN 7	SW23 DIGITAL EFFECT ON	SW31 DIGITAL EFFECT MOSAIC	SW39 SUPER IMPOSE WHITE	SW47 WIPE	SW55 BACK COLOR B	SW63 FADE CONTRO L BLACK
P37	SW8 RECALL	SW16 P in P	SW24 DIGITAL EFFECT A	SW32 DIGITAL EFFECT A/V	SW40 SUPER IMPOSE EDGE	SW48 AUDIO LINK	SW56 AUTO TAKE	SW64 AUTO FADE

Notes: SW1 - SW3 and SW33 - SW40 are mounted on the Audio Board. SW4, SW21, SW49, and SW57 are not used.

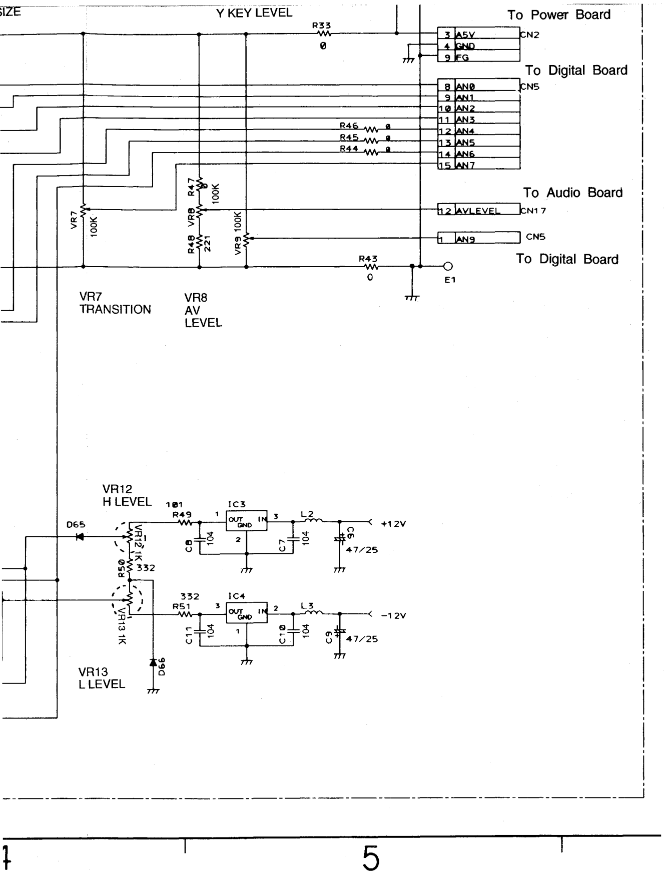
LED MATRIX

	SR19	SR20	SR21	SR22	SR23	SR24	SR25	SR26	SR27	SR28	SR29	SR30	SR31	SR32
SR15	D1 POWER	D2 POSITION ON	D3 STORE	D4 RECALL	D5 DIGITAL EFFECT ON	D6 DIGITAL EFFECT A	D7 DIGITAL EFFECT B	D8 DIGITAL EFFECT NEGA	D9 DIGITAL EFFECT MONO	D10 DIGITAL EFFECT PAINT	D11 DIGITAL EFFECT STROBE	D12 DIGITAL EFFECT STILL	D13 DIGITAL EFFECT MOSAIC	D14 DIGITAL EFFECT A/V
SR16	D15 WIPE PATTERN 1	D16 WIPE PATTERN 2	D17 WIPE PATTERN 3	D18 WIPE PATTERN 4	D19 WIPE PATTERN 5	D20 WIPE PATTERN 6	D21 WIPE PATTERN 7	D22 P in P	D23 WIPE EDGE	D24 WIPE MULTI	D25 ONE-WAY	D26 REVERSE	D27 BUS A	D28 BUS B
SR17	D29 SUPER IMPOSE ON	D30 SUPER IMPOSE A	D31 SUPER IMPOSE B	D32 SUPER IMPOSE EXT. CAMERA	D33 SUPER IMPOSE REVERSE	D34 SUPER IMPOSE BACK COLOR	D35 SUPER IMPOSE WHITE	D36 SUPER IMPOSE BLACK	D37 PROG OUT A	D38 PROG OUT B	D39 PROG OUT EFFECT	D40 AUDIO LINK	D41 GRAD	D42 Y KEY
SR18	D43 COLOR CORRECT ON	D44 COLOR CORRECT A	D45 COLOR CORRECT B	D46 MIX	D47 WIPE	D48 AUTO TAKE	D49 AUTO FADE	D50 FADE CONTROL VIDEO	D51 FADE CONTROL TITLE	D52 FADE CONTROL AUDIO	D53 FADE CONTROL BACK COLOR	D54 FADE CONTROL WHITE	D55 FADE CONTROL BLACK	D56 FADE OUT

Note: D29 - D39 are mounted on the Audio Board.

Voltage

<Index>
SWITCH BOARD
IC1 D2 D28 C5


IZE
Y KEY LEVEL
R33
0
To Power Board
3 A5V
4 GND
9 FG
CN2
To Digital Board
8 AN0
9 AN1
10 AN2
11 AN3
12 AN4
13 AN5
14 AN6
15 AN7
CN5
R46 0
R45 0
R44 0
R47 0
100K
VR7 100K
VR8
R48 221
VR9 100K
To Audio Board
12 AVLEVEL
CN17
1 AN9
CN5
To Digital Board
R43
0
E1
VR7
TRANSITION
VR8
AV
LEVEL
VR12
H LEVEL
D65
101
R49
IC3
OUT
GND
IN
1
2
3
C8 104
C7 104
L2
C6 47/25
+12V
VR12 1K
R50 332
332
R51
IC4
OUT
GND
IN
3
1
2
L3
C11 104
C10 104
C9 47/25
-12V
VR13 1K
D66
VR13
L LEVEL
4
5

	ON	A	B	EXT. CAMERA	REVERSE	BACK COLOR	WHITE	BLACK			EFFECT			
SR18	D43 COLOR CORRECT ON	D44 COLOR CORRECT A	D45 COLOR CORRECT B	D46 MIX	D47 WIPE	D48 AUTO TAKE	D49 AUTO FADE	D50 FADE CONTROL VIDEO	D51 FADE CONTROL TITLE	D52 FADE CONTROL AUDIO	D53 FADE CONTROL BACK COLOR	D54 FADE CONTROL WHITE	D55 FADE CONTROL BLACK	D56 FADE OUT

Note: D29 - D39 are mounted on the Audio Board.

Voltage

SWITCH BOARD

	IC1	IC2	IC3	IC4
Pin 1	0	1.1	6.0	0
2	0	1.8	0	-12.0
3	5.1	5.1	12.0	-5.0
4	0	0.8		
5	0	0		
6	0	0		
7	4.9	4.9		
8	0	0		
9	0	0		
10	0.8	0		
11	1.2	-		
12	1.2	0.7		
13	-	1.8		
14	4.7	-		
15	-	0.7		
16	-	-		
17	-	-		
18	4.6	-		
19	0	2.4		
20	0	-		
21	0	-		
22	0	-		
23	0	-		
24	0	-		

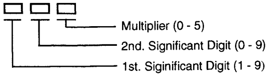
	B	C	E
Q1	0.5	1.1	0
2	0.4	1.0	0
3	0.3	0.8	0
4	0.6	0.7	0

<Index>

SWITCH BOARD

IC1	D2
IC2	D4
IC3	A5
IC4	A5
Q1	D3
Q2	C3
Q3	C3
Q4	C3
D1	D3
D2	D3
D3	D4
D4	D4
D5	D4
D6	D4
D7	D4
D8	D4
D9	D4
D10	D4
D11	D5
D12	D5
D13	D5
D14	D5
D15	C3
D16	C3
D17	C4
D18	C4
D19	C4
D20	C4
D21	C4
D22	C4
D23	C4
D24	C4
D25	C5
D26	C5
D27	C5
D28	C5
D40	C5
D41	C5
D42	C5
D43	C3
D44	C3
D45	C4
D46	C4
D47	C4
D48	C4
D49	C4
D50	C4
D51	C4
D52	C4
D53	C5
D54	C5
D55	C5
D56	C5
D57	D1
D58	D1
D59	C1
D60	C1
D61	C1
D62	C1
D63	C1
D64	C1
D65	A4
D66	A4
SW50	D2
SW51	D2
SW52	D2
SW53	D3
SW54	D3
SW55	D3

Note: The value indicated in schematic diagram should be read as follows:

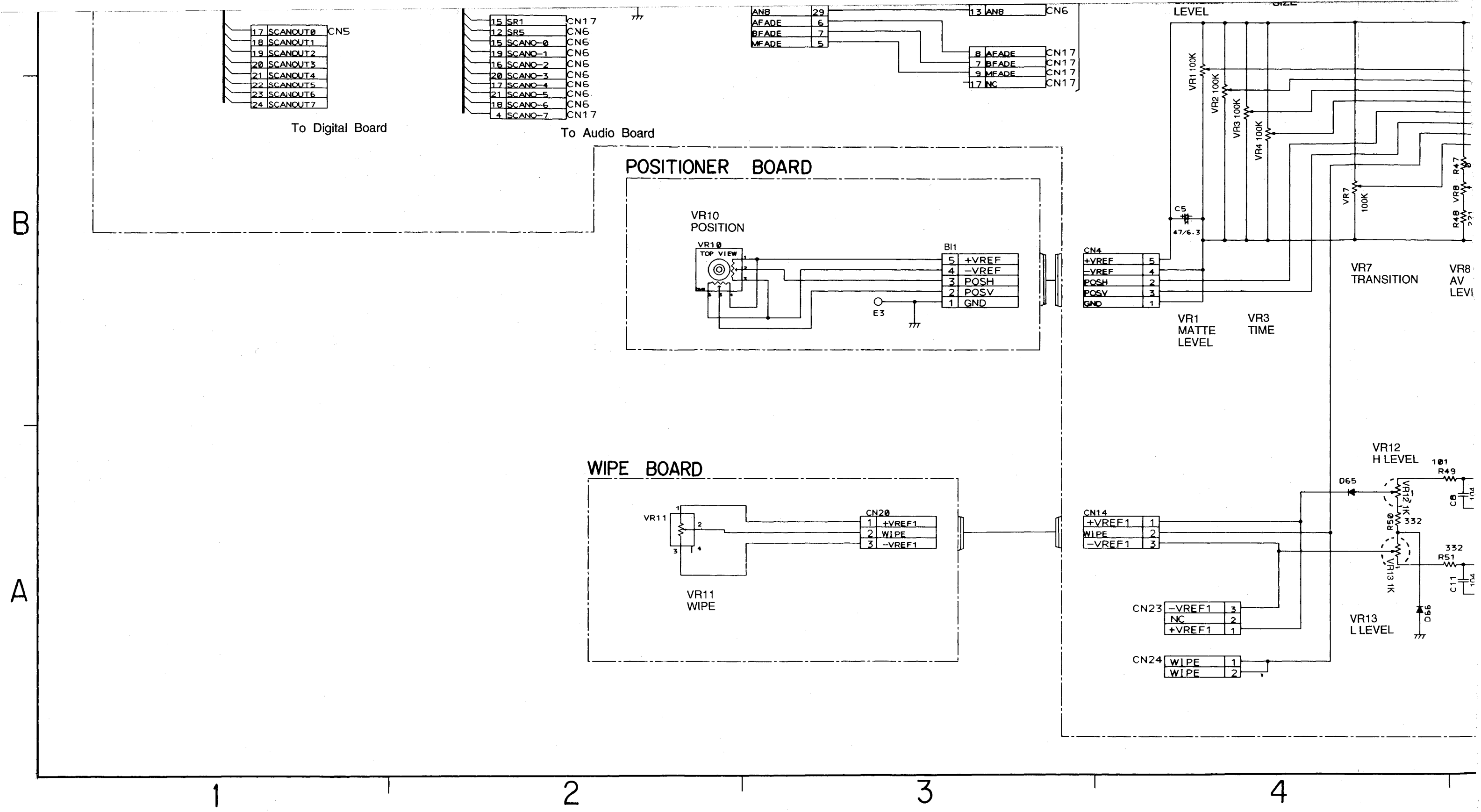

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:
$330 \longrightarrow 33 \times 10^0 = 33\Omega$
$561 \longrightarrow 56 \times 10^1 = 560\Omega$
$123 \longrightarrow 12 \times 10^3 = 12k\Omega$

For Capacitor:
$820 \longrightarrow 82 \times 10^0 = 82pF$
$102 \longrightarrow 10 \times 10^2 = 1000pF = 0.001\mu F$
$104 \longrightarrow 10 \times 10^4 = 100000pF = 0.1\mu F$

The suffix attached to capacitance indicates a type of capacitor.


17 SCANOUT0 CN5
18 SCANOUT1
19 SCANOUT2
20 SCANOUT3
21 SCANOUT4
22 SCANOUT5
23 SCANOUT6
24 SCANOUT7
To Digital Board
15 SR1 CN17
12 SR5 CN6
15 SCANO-0 CN6
19 SCANO-1 CN6
16 SCANO-2 CN6
20 SCANO-3 CN6
17 SCANO-4 CN6
21 SCANO-5 CN6
18 SCANO-6 CN6
4 SCANO-7 CN17
To Audio Board
AN8 29
AFADE 6
BFADE 7
MFADE 5
13 AN8 CN6
8 AFADE CN17
7 BFADE CN17
9 MFADE CN17
17 NC CN17
LEVEL
POSITIONER BOARD
VR10
POSITION
VR10
TOP VIEW
BI1
5 +VREF
4 -VREF
3 POSH
2 POSV
1 GND
E3
CN4
+VREF 5
-VREF 4
POSH 2
POSV 3
GND 1
C5
47/6.3
VR1 100K
VR2 100K
VR3 100K
VR4 100K
VR7 100K
R47
VR8
R48
VR1
MATTE
LEVEL
VR3
TIME
VR7
TRANSITION
VR8
AV
LEVI
WIPE BOARD
VR11
CN20
1 +VREF1
2 WIPE
3 -VREF1
VR11
WIPE
CN14
+VREF1 1
WIPE 2
-VREF1 3
VR12
H LEVEL
101
R49
D65
VR12 1K
R50 332
C8
332
R51
VR13 1K
C11
D66
CN23
-VREF1 3
NC 2
+VREF1 1
VR13
L LEVEL
CN24
WIPE 1
WIPE 2
B
A
1
2
3
4

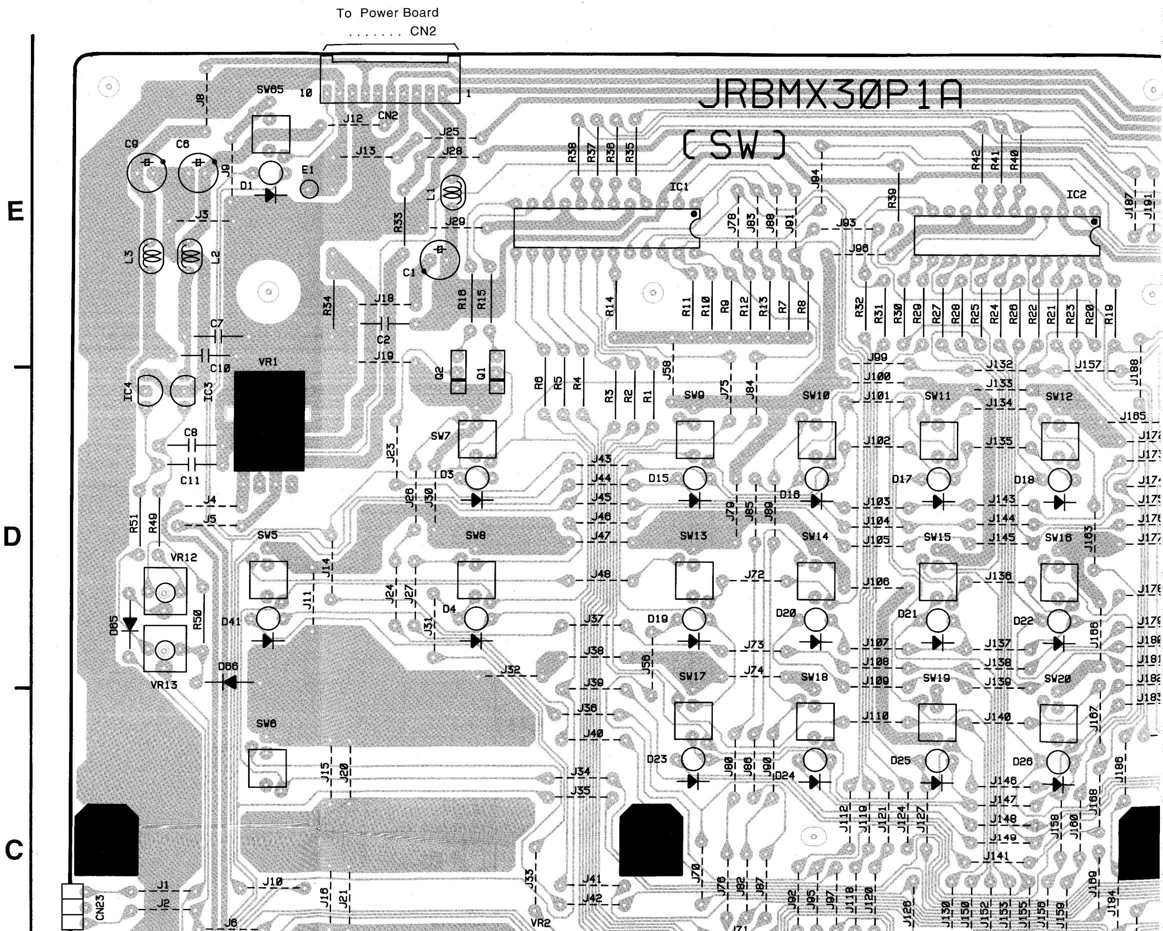
CONDUCTOR VIEW OF

<Index>

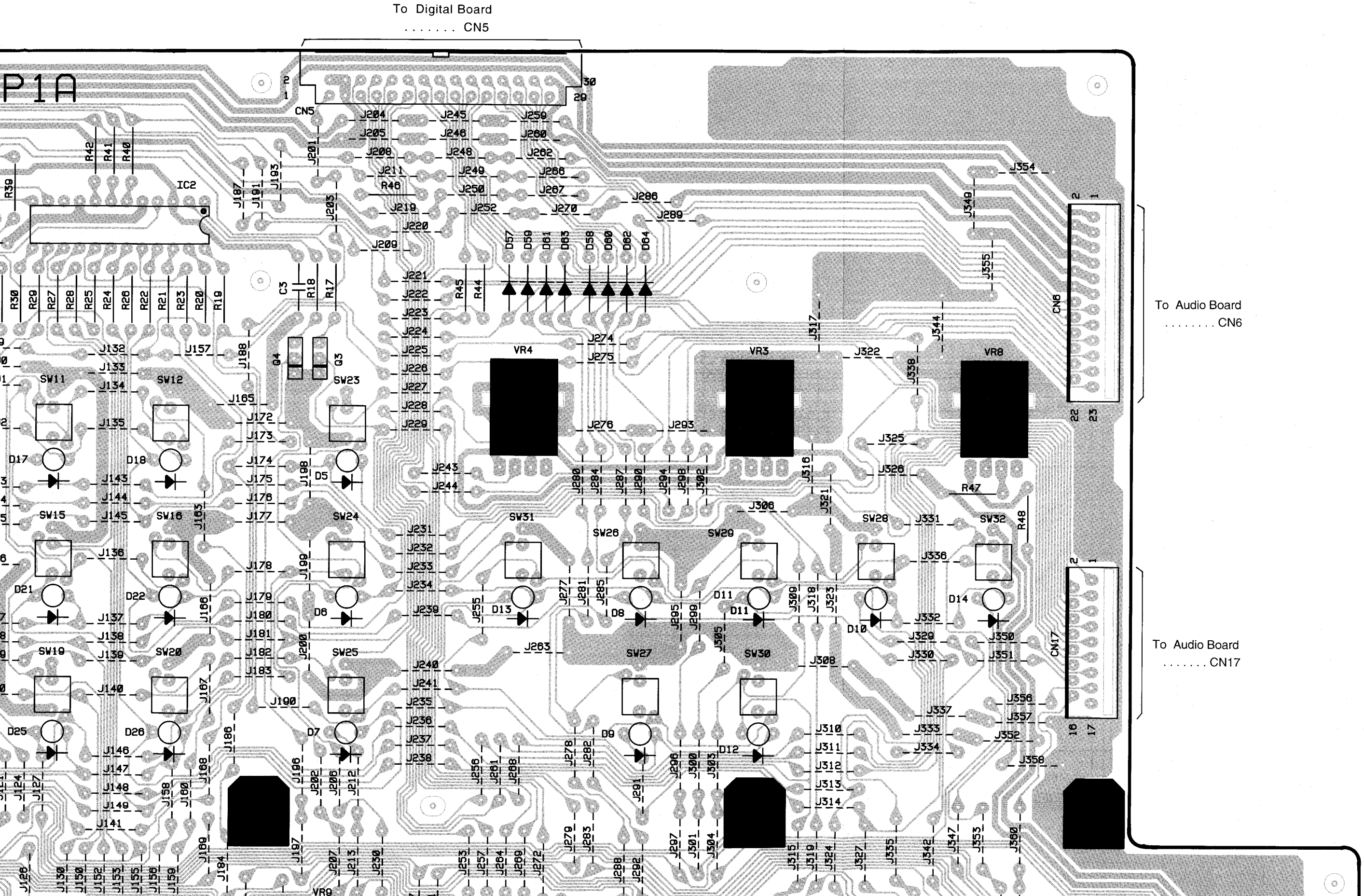
Switch Board

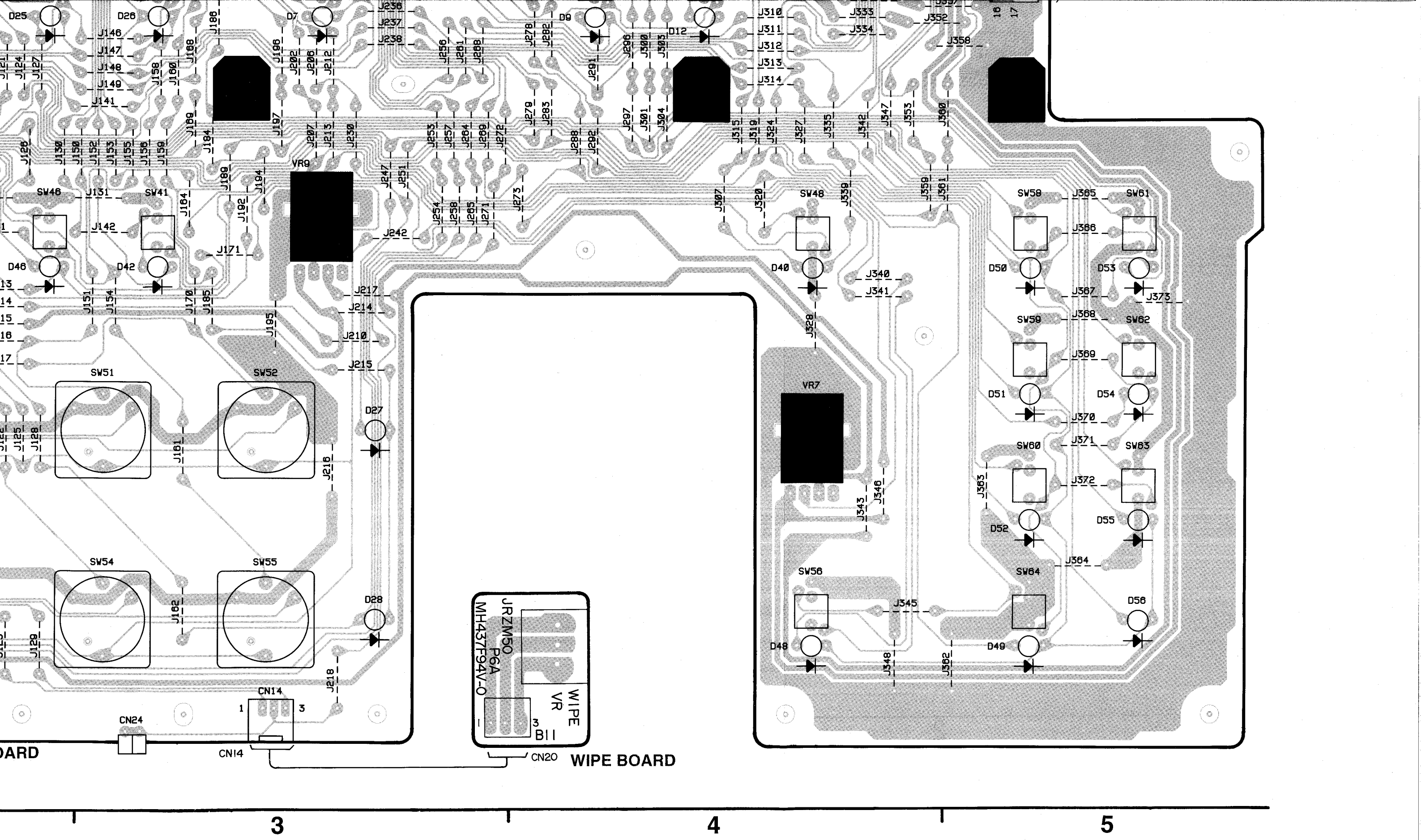
IC1	E2	SW5	D1
IC2	E3	SW6	C1
IC3	D1	SW7	D1
IC4	D1	SW8	D1
Q1	D1	SW9	D2
Q2	D1	SW10	D2
Q3	D3	SW11	D2
Q4	D3	SW12	D3
D1	E1	SW13	D2
D2	B1	SW14	D2
D3	D1	SW15	D2
D4	D1	SW16	D3
D5	D3	SW17	C2
D6	D3	SW18	C2
D7	C3	SW19	C2
D8	D4	SW20	C3
D9	C4	SW23	D3
D10	D4	SW24	D3
D11	D4	SW25	C3
D12	C4	SW26	D4
D13	D3	SW27	C4
D14	D4	SW28	D4
D15	D3	SW29	D4
D16	D3	SW30	C4
D17	D3	SW31	D3
D18	D3	SW32	D4
D19	D2	SW41	B3
D20	D2	SW42	B2
D21	D2	SW43	B2
D22	D3	SW44	B2
D23	C2	SW45	A2
D24	C2	SW46	B2
D25	C2	SW47	B2
D26	C3	SW48	B4
D27	B3	SW50	A2
D28	A3	SW51	B3
D40	B4	SW52	B3
D41	D1	SW53	A2
D42	B3	SW54	A3
D43	B2	SW55	A3
D44	A2	SW56	A4
D45	A2	SW58	B5
D46	B2	SW59	B5
D47	B2	SW60	A5
D48	A4	SW61	B5
D49	A5	SW62	B5
D50	B5	SW63	A5
D51	B5	SW64	A5
D52	A5	SW65	E1
D53	B5		
D54	B5		
D55	A5		
D56	A5		
D57	E3		
D58	E4		
D59	E3		
D60	E4		
D61	E3		
D62	E4		
D63	E4		
D64	E4		
D65	D1		
D66	C1		

SWITCH BOARD

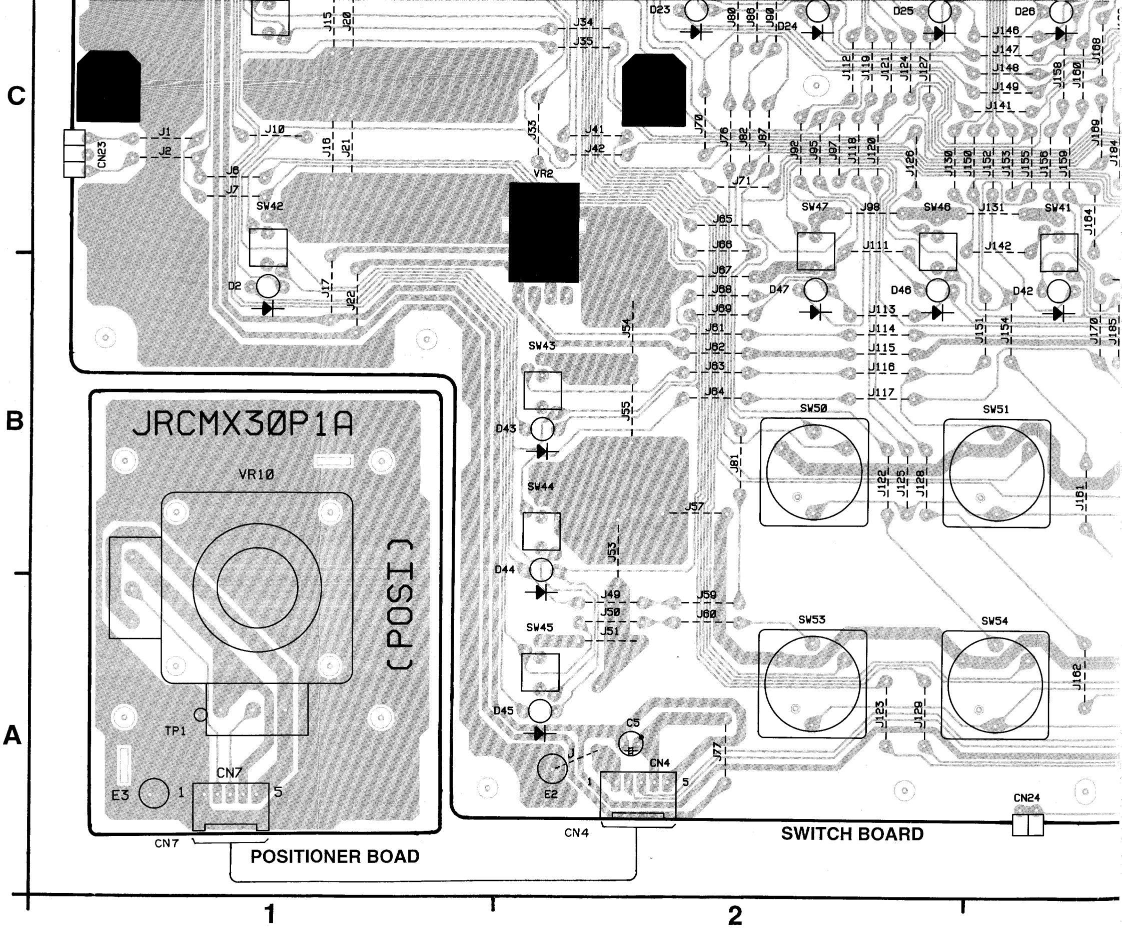

To Power Board
.... CN2
10
1
CN2
JRBMX30P1A
(SW)
E
D
C
SW65
C9
C6
E1
D1
L1
L2
L3
C1
C2
C7
C10
C8
C11
VR1
VR12
VR13
VR2
IC1
IC2
IC3
IC4
Q1
Q2
R33
R34
R35
R36
R37
R38
R39
R40
R41
R42
R49
R50
R51
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW19
SW20
D3
D4
D15
D16
D17
D18
D19
D20
D21
D22
D23
D24
D25
D26
D41
D65
D66
CN23

CONDUCTOR VIEW OF SWITCH BOARD


To Digital Board
.... CN5
P1A
CN5
IC2
To Audio Board
.... CN6
CN6
VR4
VR3
VR8
SW11
SW12
SW23
SW15
SW16
SW24
SW31
SW26
SW29
SW28
SW32
SW19
SW20
SW25
SW27
SW30
To Audio Board
.... CN17
CN17
VR9

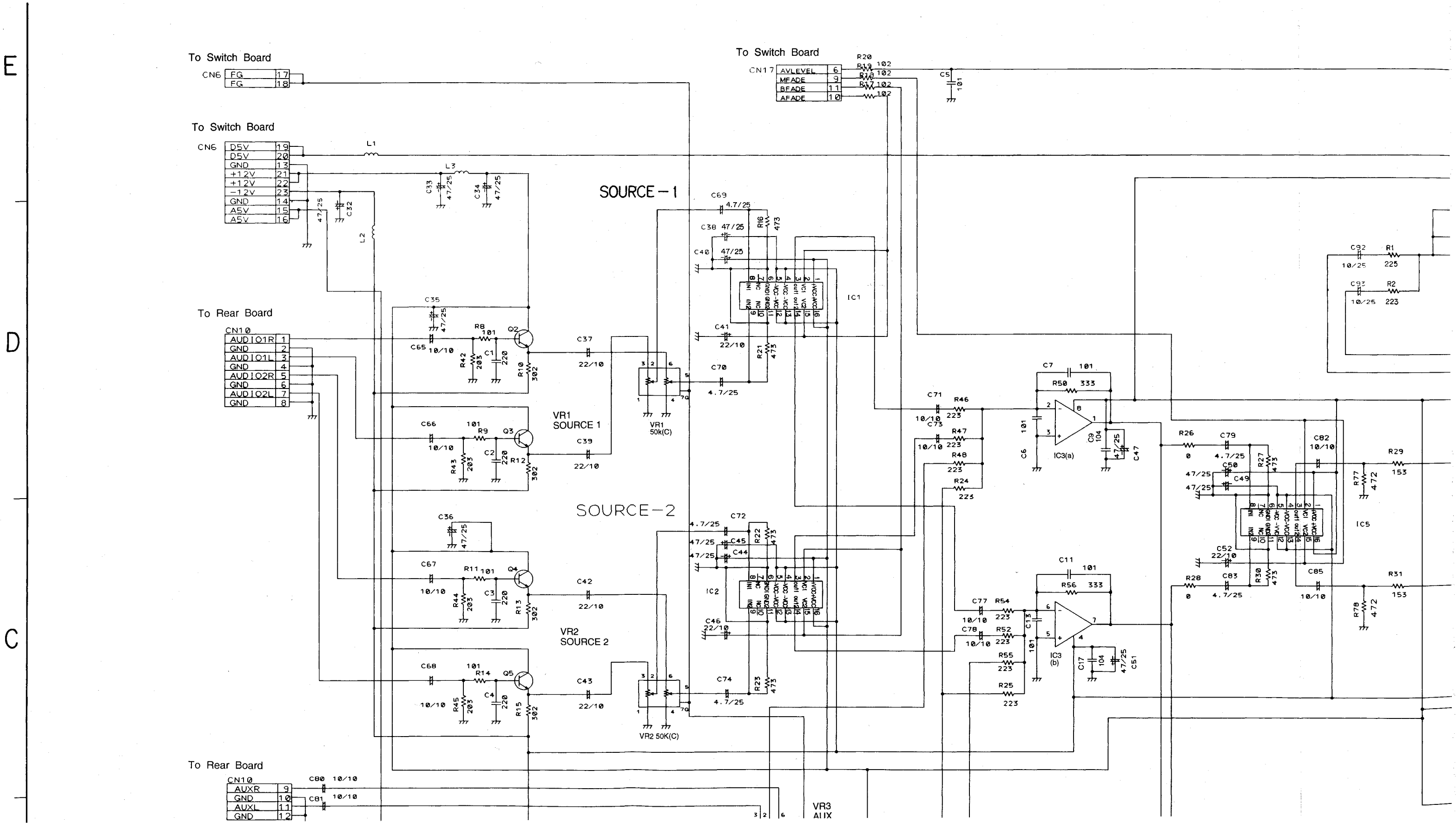
D25
D26
D7
D9
D12
J146
J147
J148
J149
J141
J236
J237
J238
J310
J311
J312
J313
J314
J333
J334
J352
J358
VR9
VR7
SW46
SW41
SW48
SW58
SW61
SW59
SW62
SW60
SW63
SW51
SW52
SW54
SW55
SW56
SW64
J131
J142
J171
J242
J217
J214
J210
J215
J216
J218
J161
J162
J340
J341
J345
J348
J362
J364
J365
J366
J367
J368
J369
J370
J371
J372
J373
J363
J343
J346
J328
D46
D42
D40
D50
D53
D51
D54
D52
D55
D56
D48
D49
D27
D28
CN14
CN24
CN20
1
3
JRZM50
P6A
MH437F94V-0
WIPE
VR
B11
WIPE BOARD
OARD
3
4
5

D58	E4
D59	E3
D60	E4
D61	E3
D62	E4
D63	E4
D64	E4
D65	D1
D66	C1

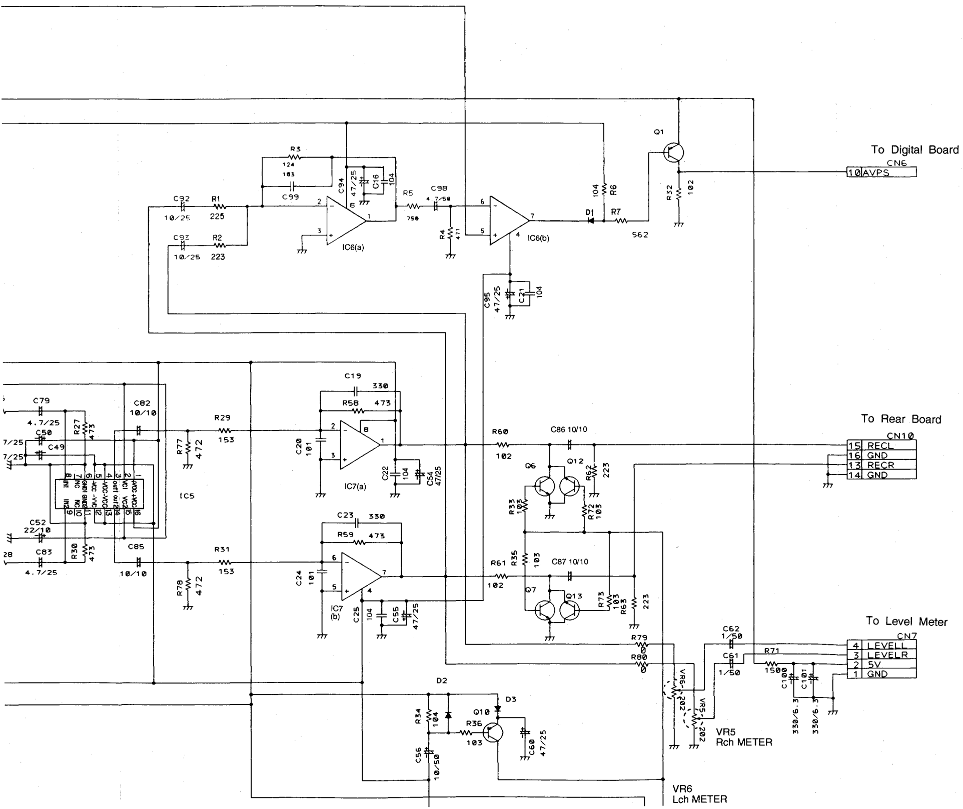

C
B
A
1
2
JRCMX30P1A
VR10
(POSI)
TP1
E3
CN7
1
5
POSITIONER BOAD
CN23
J1
J2
J6
J7
J10
SW42
D2
VR2
SW43
D43
SW44
D44
SW45
D45
E2
C5
CN4
SW47
SW46
SW41
D47
D46
D42
D23
D24
D25
D26
SW50
SW51
SW53
SW54
CN24
SWITCH BOARD

SCHEMATIC DIAGRAM OF AUDIO BOAR

AUDIO BOARD


E
D
C
To Switch Board
CN6
FG 17
FG 18
To Switch Board
CN6
D5V 19
D5V 20
GND 13
+12V 21
+12V 22
−12V 23
GND 14
A5V 15
A5V 16
L1
L2
L3
C33 47/25
C34 47/25
47/25 C32
SOURCE−1
SOURCE−2
To Rear Board
CN10
AUDIO1R 1
GND 2
AUDIO1L 3
GND 4
AUDIO2R 5
GND 6
AUDIO2L 7
GND 8
C35 47/25
C65 10/10
R8 101
Q2
R42 203
C1 220
R10 302
C37 22/10
C66 10/10
101 R9
Q3
R43 203
C2 220
R12 302
C39 22/10
VR1 SOURCE 1
VR1 50k(C)
C36 47/25
C67 10/10
R11 101
Q4
R44 203
C3 220
R13 302
C42 22/10
VR2 SOURCE 2
C68 10/10
101 R14
Q5
R45 203
C4 220
R15 302
C43 22/10
VR2 50K(C)
To Switch Board
CN17
AVLEVEL 6
MFADE 9
BFADE 11
AFADE 10
R20 R19 102
R18 102
R17 102
102
C5 101
C69 4.7/25
C38 47/25
R16 473
C40 47/25
IC1
C41 22/10
R21 473
C70 4.7/25
C72 4.7/25
C45 47/25
R22 473
C44 47/25
IC2
C46 22/10
C74 4.7/25
R23 473
INI NC GND NC VCC- VCC- VCC- VCC+ out1 out2 VC1 VC2 VCC+ VCC+
C71 10/10 R46 223
C73 10/10 R47 223
R48 223
R24 223
C7 101
R50 333
C6 101
IC3(a)
C9 104
C47 47/25
C11 101
R56 333
C77 10/10 R54 223
C78 10/10 R52 223
R55 223
R25 223
C13 101
IC3 (b)
C17 104
C51 47/25
C92 10/25 R1 225
C93 10/25 R2 223
R26 0
C79 4.7/25
C50 47/25
C49 47/25
R27 473
C82 10/10
R29 153
R77 472
IC5
C52 22/10
R28 0
C83 4.7/25
R30 473
C85 10/10
R31 153
R78 472
To Rear Board
CN10
AUXR 9
GND 10
AUXL 11
GND 12
C80 10/10
C81 10/10
VR3
AUX

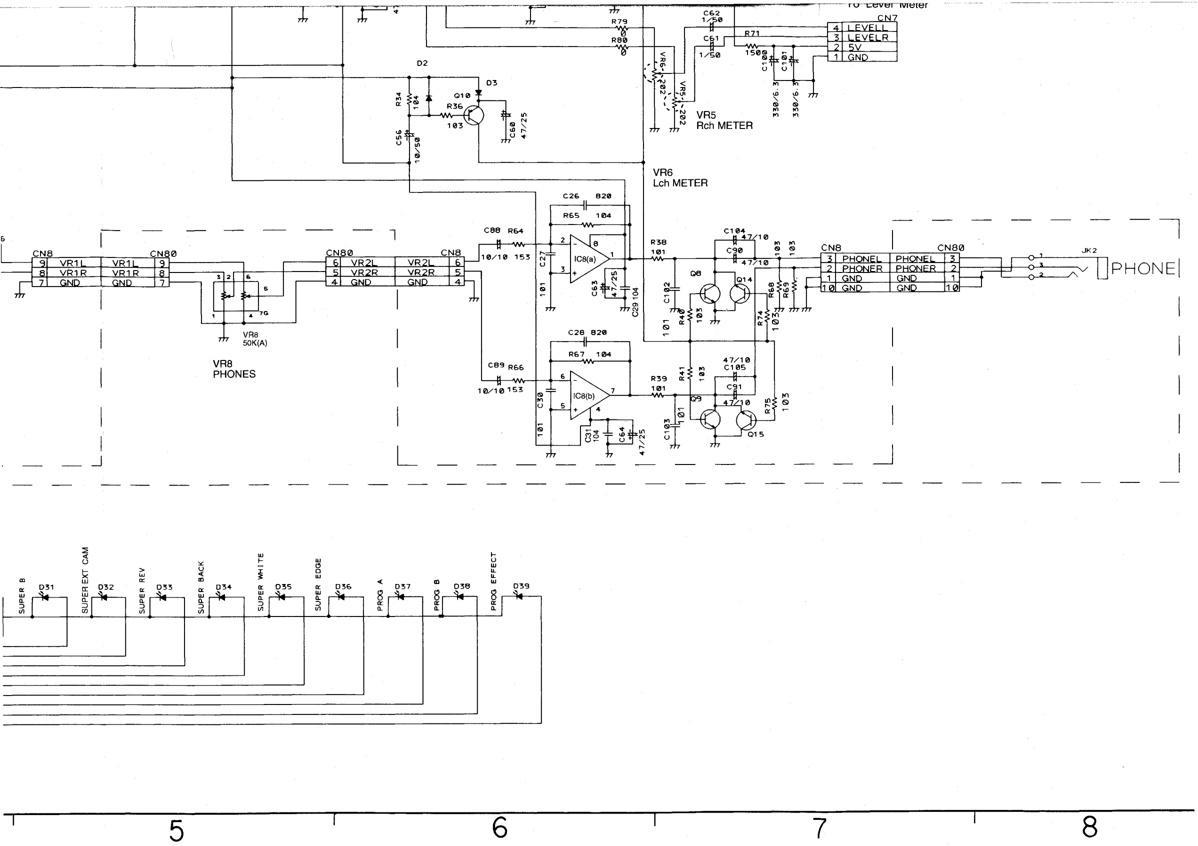
RAM OF AUDIO BOARD


To Digital Board
CN6
10 AVPS
To Rear Board
CN10
15 RECL
16 GND
13 RECR
14 GND
To Level Meter
CN7
4 LEVELL
3 LEVELR
2 5V
1 GND
Q1
R32 102
R6 104
D1
R7 562
R3 124
183
C99
C94 47/25
C16 104
R5 750
C98 4.7/50
R4 471
C92 10/25
R1 225
C93 10/25
R2 223
IC6(a)
IC6(b)
C95 47/25
C21 104
C79 4.7/25
C50
C49
R27 473
C82 10/10
R29 153
R77 472
C20 101
C19 330
R58 473
IC7(a)
C22 104
C54 47/25
IC5
C52 22/10
C83 4.7/25
R30 473
C85 10/10
R31 153
R78 472
C24 101
C23 330
R59 473
IC7 (b)
C25 104
C55 47/25
R60 102
C86 10/10
Q6
Q12
R62 223
R33 103
R72 103
R35 103
R61 102
C87 10/10
Q7
Q13
R73 103
R63 223
R79 0
R80 0
C62 1/50
C61 1/50
R71 1500
C100 330/6.3
C101 330/6.3
VR6-202
VR5-202
VR5
Rch METER
VR6
Lch METER
D2
D3
Q10
R34 104
R36 103
C56 10/50
C60 47/25

AUDIO BOARD

	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8
Pin 1	11.5	11.5	0	0	11.5	0	0	0
2	0	0	0	0	3.6	0	0	0
3	0	0	0	0	0	0	0	0
4	-11.7	-11.7	-11.7	-11.7	-11.7	-11.7	-11.7	-11.7
5	-11.7	-11.7	0	0	-11.7	2.4	0	0
6	0	0	0	0	0	0	0	0
7	-	-	0	0	-	11.2	0	0
8	0	0	11.5	11.5	0	11.5	11.5	11.5
9	0	0			0			
10	-	-			-			
11	0	0			0			
12	-11.7	-11.7			-11.7			
13	-11.7	-11.7			-11.7			
14	0	0			0			
15	0	0			3.6			
16	11.5	11.5			11.5			

	B	C	E
Q1	11.4	0	5.2
2	-0.2	11.5	-0.9
3	-0.2	11.5	-0.8
4	-0.2	11.5	-0.8
5	-0.2	11.5	-0.8
6	-	0	0
7	-	0	0
8	-	0	0
9	-	0	0
10	11.4	0.3	11.3
12	-	0	0
13	-	0	0
14	-	0	0
15	-	0	0

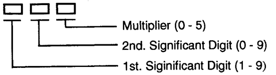

To Level Meter
CN7
LEVELL
LEVELR
5V
GND
R79
R80
C62 1/50
C61 1/50
R71 1500
C100 330/6.3
C101 330/6.3
VR6-202
VR5-202
VR5
Rch METER
VR6
Lch METER
D2
D3
Q10
R34 104
R36 103
C56 10/50
C60 47/25
C26 820
R65 104
C88 R64
10/10 153
IC8(a)
C27 101
C63 47/25
C29 104
R38 101
C104 47/10
C90 47/10
Q8
Q14
C102 101
R40 103
R68 103
R69 103
R74 103
CN8
CN80
VR1L
VR1R
GND
VR2L
VR2R
PHONEL
PHONER
JK2
PHONE
VR8 50K(A)
VR8
PHONES
C28 820
R67 104
C89 R66
10/10 153
IC8(b)
C30 101
C31 104
C64 47/25
R39 101
R41 103
C105 47/10
C91 47/10
C103 101
Q9
Q15
R75 103
SUPER B
D31
SUPER EXT CAM
D32
SUPER REV
D33
SUPER BACK
D34
SUPER WHITE
D35
SUPER EDGE
D36
PROG A
D37
PROG B
D38
PROG EFFECT
D39
5
6
7
8

<Index>

AUDIO BOARD

IC1	D3
IC2	C3
IC3	C4, D4
IC4	B3
IC5	C5
IC6	D5, D6
IC7	C5, D5
IC8	B6
Q1	E7
Q2	D2
Q3	D2
Q4	C2
Q5	C2
Q6	C5
Q7	C6
Q8	B7
Q9	B7
Q10	C6
Q12	C6
Q13	C6
Q14	B7
Q15	B7
D1	D6
D2	C6
D3	C6
D29	A4
D30	A4
D31	A5
D32	A5
D33	A5
D34	A5
D35	A5
D36	A6
D37	A6
D38	A6
D39	A6

Note: The value indicated in schematic diagram should be read as follows:

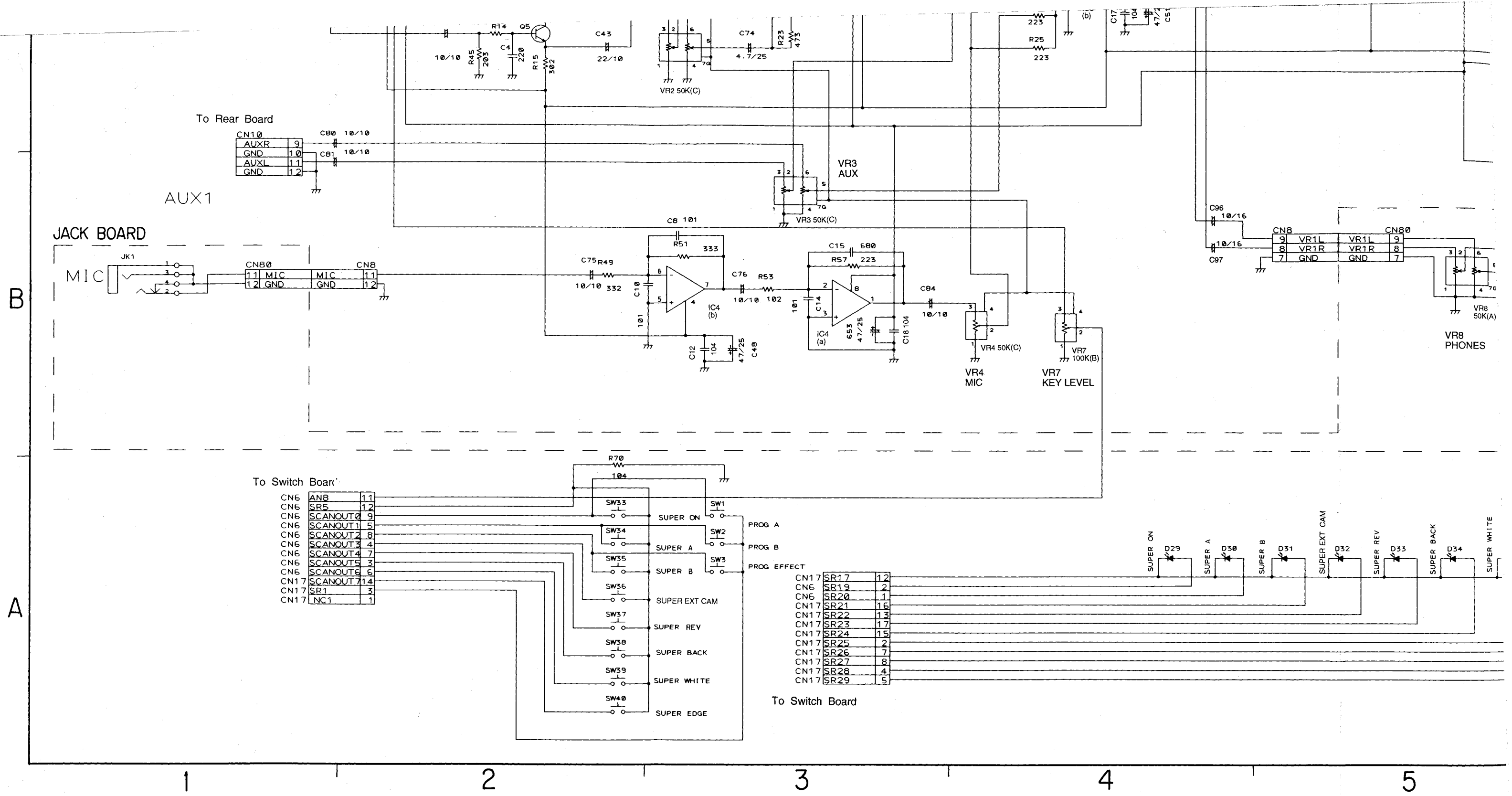

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

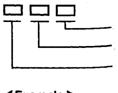
For Resistor: 330 → 33 x 10^0 = 33Ω
561 → 56 x 10^1 = 560Ω
123 → 12 x 10^3 = 12kΩ

For Capacitor: 820 → 82 x 10^0 = 82pF
102 → 10 x 10^2 = 1000pF = 0.001μF
104 → 10 x 10^4 = 100000pF = 0.1μF

The suffix attached to capacitance indicates a type of capacitor.


R14
Q5
C43
C74
R23
473
223
R25
223
C17
104
C51
10/10
R45
203
C4
220
R15
302
22/10
4.7/25
VR2 50K(C)
To Rear Board
CN10
AUXR 9
GND 10
AUXL 11
GND 12
C80 10/10
C81 10/10
VR3
AUX
VR3 50K(C)
AUX1
JACK BOARD
JK1
MIC
CN80
11 MIC
12 GND
CN8
MIC 11
GND 12
C8 101
R51
333
C75 R49
10/10 332
C10
101
IC4
(b)
C12
104
47/25
C48
C76
R53
10/10 102
C15 680
R57 223
C14
101
IC4
(a)
653
47/25
C18 104
C84
10/10
VR4 50K(C)
VR4
MIC
VR7
100K(B)
VR7
KEY LEVEL
C96
10/16
C97
10/16
CN8
9 VR1L
8 VR1R
7 GND
CN80
VR1L 9
VR1R 8
GND 7
VR8
50K(A)
VR8
PHONES
R70
104
To Switch Board
CN6 AN8 11
CN6 SR5 12
CN6 SCANOUT0 9
CN6 SCANOUT1 5
CN6 SCANOUT2 8
CN6 SCANOUT3 4
CN6 SCANOUT4 7
CN6 SCANOUT5 3
CN6 SCANOUT6 6
CN17 SCANOUT7 14
CN17 SR1 3
CN17 NC1 1
SW33
SUPER ON
SW1
PROG A
SW34
SUPER A
SW2
PROG B
SW35
SUPER B
SW3
PROG EFFECT
SW36
SUPER EXT CAM
SW37
SUPER REV
SW38
SUPER BACK
SW39
SUPER WHITE
SW40
SUPER EDGE
CN17 SR17 12
CN6 SR19 2
CN6 SR20 1
CN17 SR21 16
CN17 SR22 13
CN17 SR23 17
CN17 SR24 15
CN17 SR25 2
CN17 SR26 7
CN17 SR27 8
CN17 SR28 4
CN17 SR29 5
To Switch Board
SUPER ON
D29
SUPER A
D30
SUPER B
D31
SUPER EXT CAM
D32
SUPER REV
D33
SUPER BACK
D34
SUPER WHITE
B
A
1
2
3
4
5

Note: The value indicated



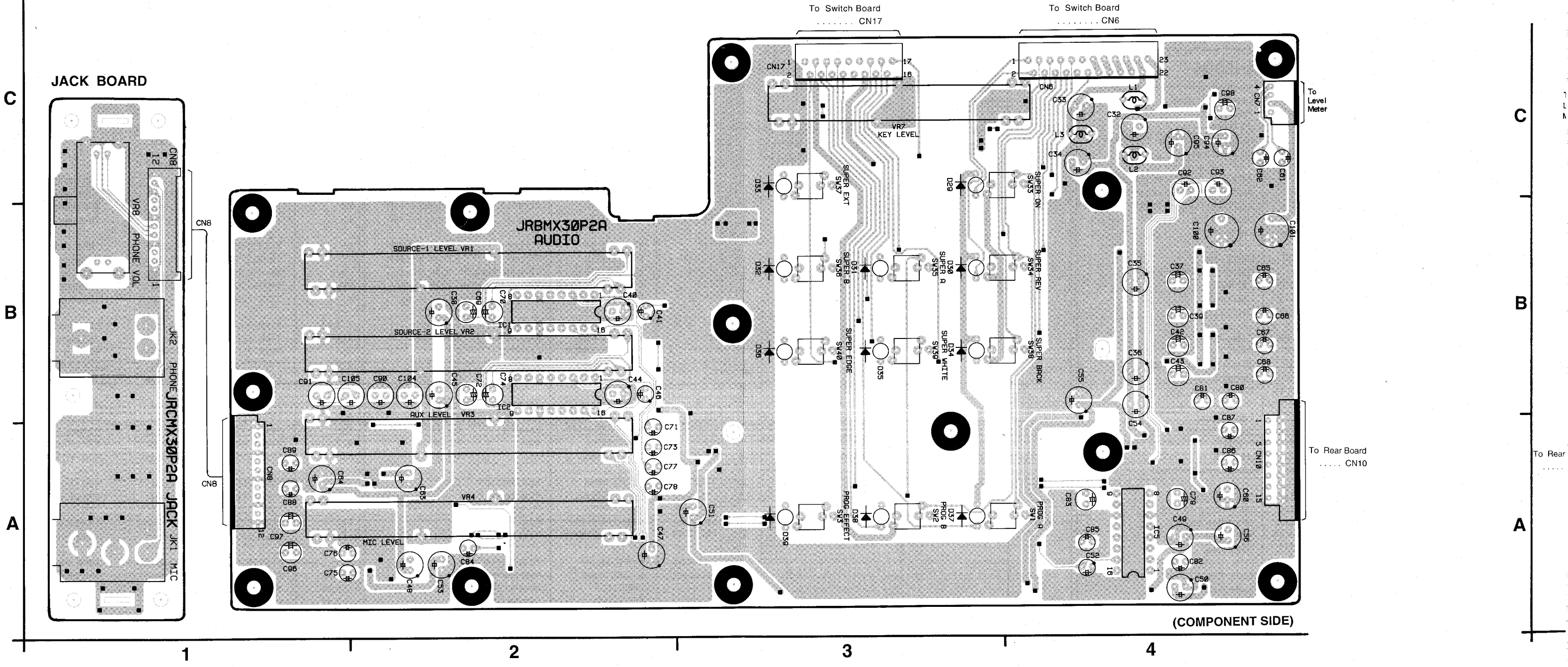
<Example>

For Resistor: 330—
561—
123—

CONDUCTOR VIER OF AUD

COMPONENT SIDE

AUDIO BOARD


JACK BOARD
C
B
A
1
2
3
4
CN8
VR8 PHONE VOL
JK2 PHONE
JRCMX30P2A JACK
JK1 MIC
To Switch Board CN17
To Switch Board CN6
CN17
CN6
VR7 KEY LEVEL
JRBMX30P2A AUDIO
SOURCE-1 LEVEL VR1
SOURCE-2 LEVEL VR2
AUX LEVEL VR3
VR4
MIC LEVEL
IC1
IC2
IC5
SUPER EXT SW37
SUPER ON SW33
SUPER B SW36
SUPER A SW35
SUPER REV SW34
SUPER EDGE SW40
SUPER WHITE SW39
SUPER BACK SW38
PROG EFFECT SW3
PROG B SW2
PROG A SW1
L1
L2
L3
CN7
To Level Meter
CN10
To Rear Board CN10
To Rear
(COMPONENT SIDE)

<Index>
Audio Board
(Pattern Side)

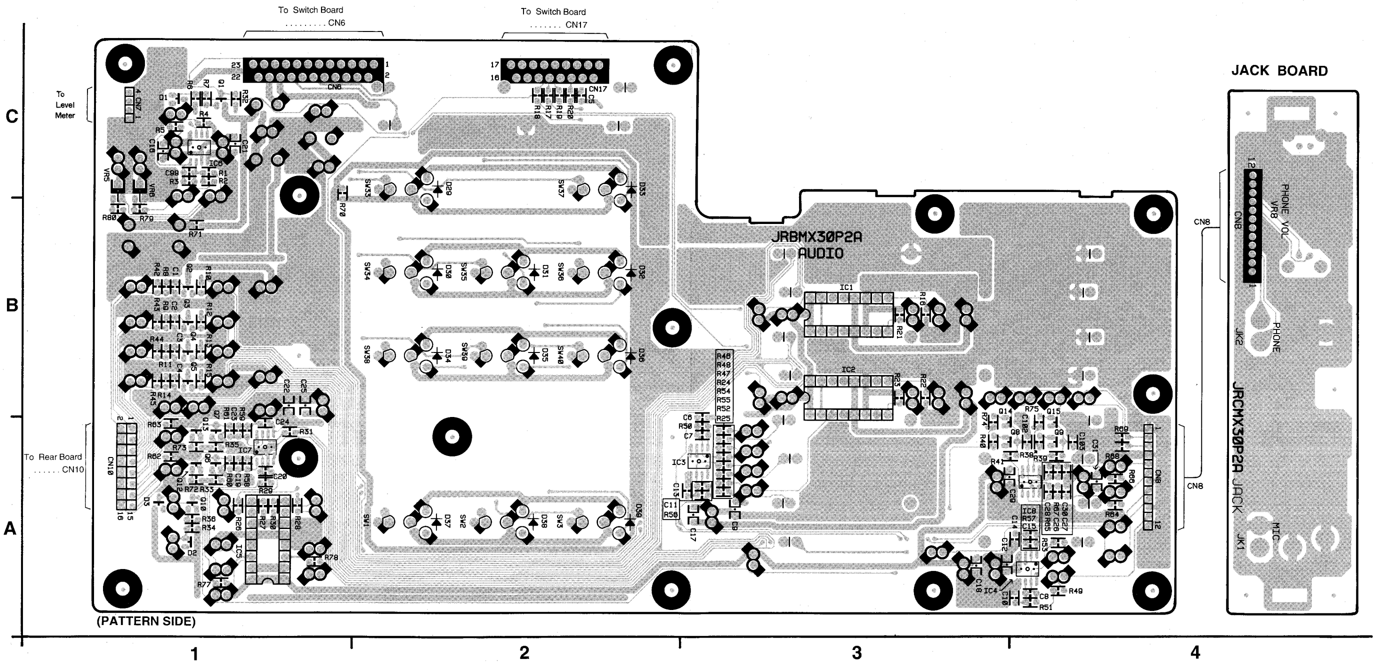
IC3	A3	Q1	C1	Q6	A1	Q12	A1
IC4	A4	Q2	B1	Q7	B1	Q13	B1
IC6	C1	Q3	B1	Q8	B4	Q14	B4
IC7	A1	Q4	B1	Q9	B4	Q15	B4
IC8	A4	Q5	B1	Q10	A1		

TOR VIER OF AUDIO BOARD

Board
CN10

PATTERN SIDE

AUDIO BOARD



To Switch Board
.... CN6
To Switch Board
.... CN17
To
Level
Meter
To Rear Board
...... CN10
C
B
A
1
2
3
4
JACK BOARD
JRBMX30P2A
AUDIO
JRCMX30P2A JACK
IC1
IC2
IC3
IC4
IC5
IC6
IC7
CN6
CN7
CN8
CN10
CN17
PHONE VOL
VR8
PHONE
JK2
MIC
JK1
SW1
SW2
SW3
SW33
SW34
SW35
SW36
SW37
SW38
SW39
SW40
D29
D30
D31
D32
D33
D34
D35
D36
D37
D38
D39
(PATTERN SIDE)

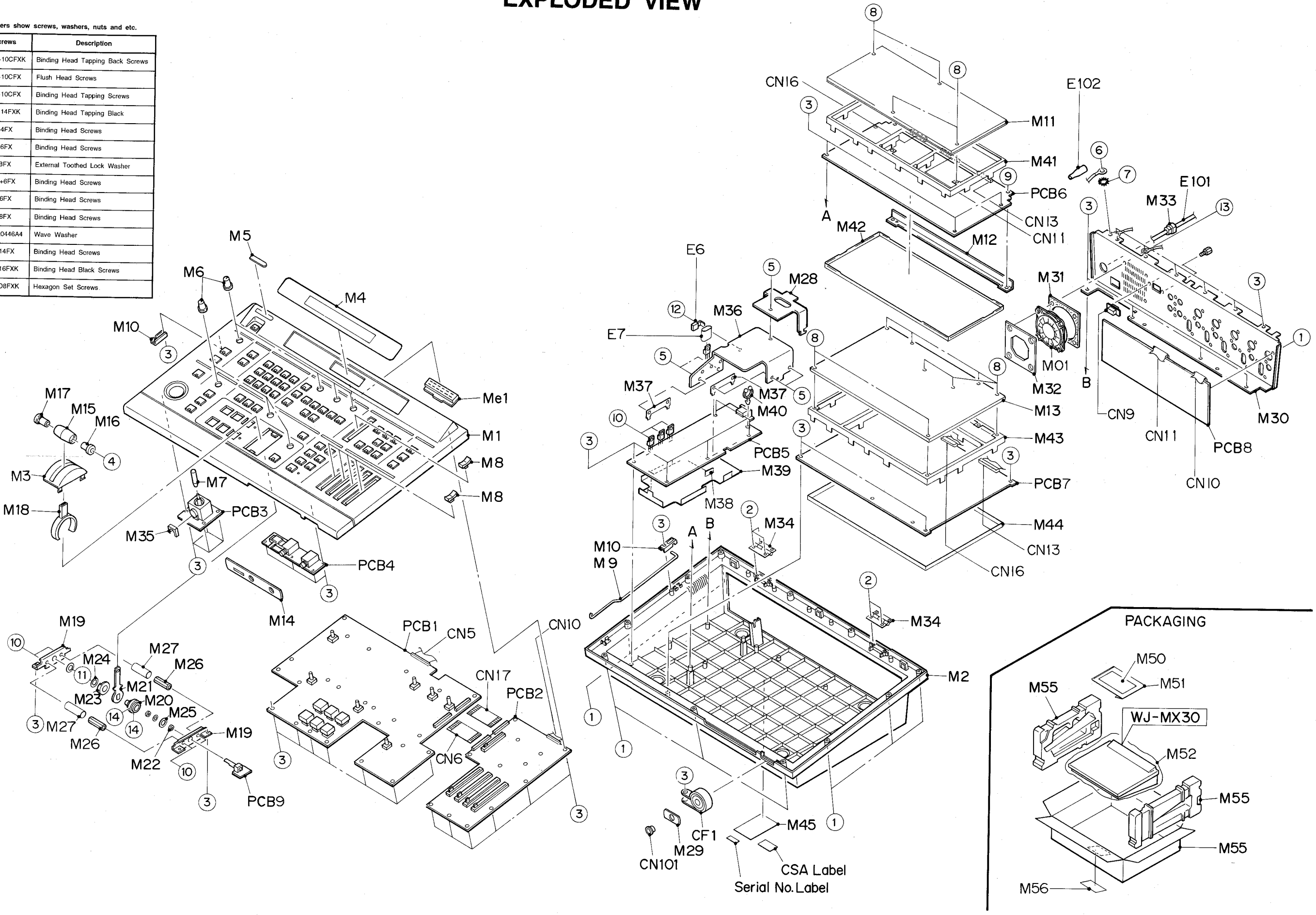
<Index>
Audio Board
(Component Side)

IC1	B2
IC2	B2
IC5	A4
D29	C4
D30	B4
D31	B3
D32	B3
D33	C3
D34	B4
D35	B3
D36	B3
D37	A4
D38	A3
D39	A3
SW1	A4
SW2	A3
SW3	A3
SW33	C4
SW34	B4
SW35	B3
SW36	B3
SW37	C3
SW38	B4
SW39	B3
SW40	B3

EXPLODED VIEW

○ Numbers show screws, washers, nuts and etc.

No.	Screws	Description
①	XTB3+10CFXK	Binding Head Tapping Back Screws
②	XTS3+10CFX	Flush Head Screws
③	XTB3+10CFX	Binding Head Tapping Screws
④	XTB3+14FXK	Binding Head Tapping Black
⑤	XSB3+4FX	Binding Head Screws
⑥	XSB4+6FX	Binding Head Screws
⑦	XWC4BFX	External Toothed Lock Washer
⑧	XSB26+6FX	Binding Head Screws
⑨	XSB3+6FX	Binding Head Screws
⑩	XSB3+8FX	Binding Head Screws
⑪	YW4JA0446A4	Wave Washer
⑫	XYS3+14FX	Binding Head Screws
⑬	XSB4+16FXK	Binding Head Black Screws
⑭	XXE26D8FXK	Hexagon Set Screws

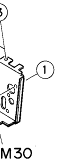

⑧
⑧
CN16
③
M11
M41
⑨
PCB6
A
M42
M12
CN13
CN11
E102
⑥
⑦
E101
M33
⑬
③
M31
③
①
M01
M32
B
CN9
CN11
PCB8
M30
CN10
M5
M6
M4
M10
③
Me1
M1
M8
M8
M17
M15
M16
④
M3
M18
M7
PCB3
M35
③
PCB4
③
M14
E6
⑤
M28
⑫
M36
E7
⑤
⑧
⑧
M37
M37
⑤
M40
⑩
③
PCB5
M39
M38
③
M13
M43
③
PCB7
M44
CN13
CN16
③
A
B
②
M34
M10
M9
②
M34
M2
M19
⑩
M24
⑪
M27
M26
M21
M23
M20
⑭
M25
⑭
③ M27
M26
M22
⑩
M19
③
PCB9
PCB1
CN5
CN17
PCB2
CN6
CN10
③
③
①
①
①
③
CF1
M29
CN101
M45
①
CSA Label
Serial No. Label
PACKAGING
M50
M55
M51
WJ-MX30
M52
M55
M55
M56

Important Notic

1. Components id
When replacing

2. RTL : Retention

REF.NO.	PA
Me1	YWL
CF1	YWT
MO1	YW06
E6	YWM
E7	YW45
E101 ⚠	YWA YWG YWA
E102	YFCD
CN5	YWF
CN6	YW23
CN9	YWM
CN10	YWF
CN11	YWF
CN13	YWF
CN16	YWF
CN17	YW17
CN101	YWD
M1	YWV
M2	YWV
M3	YWV
M4	YWV
M5	YWV
M6	YWV
M7	YWV
M8	YWV
M9	YWV
M10	YWV
M14	YWV
M15	YWV
M16	YWV
M17	YWV
M18	YWV
M19	YWV
M20	YWV4
M21	YWV4
M22	YWV
M23	YWV1
M24	YWV1
M25	YWV1
M26	-MAS
M27	YWV5
M28	YWV
M29	YWV5
M30	YWV5



REPLACEMENT PARTS LIST

Important Notice

1. Components identified by "⚠" mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited,

MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION
Me1	YWLI1244	Level Meter Unit
CF1	YWTRCN16813	Filter
MO1	YW061012L180	DC Motor
E6	YWM1748A	Mounting Holder for Transistor
E7	YW45T01130L	Insulator Tube
E101 ⚠	YWACJ450/A	AC Power Cord for WJ-MX30/A
	YWGTBS2R5B	AC Power Cord for WJ-MX30/B
	YWACJ450/G	AC Power Cord for WJ-MX30/G
E102	YFCD20ACCAP	Insulator Cap
CN5	YWFCHZZ30064	Cable Assy
CN6	YW23B085DGE	Cable Assy
CN9	YWMX3007A	RS232C Connector Assy
CN10	YWFCHZZ16042	Cable Assy
CN11	YWFCHZZ40125	Cable Assy
CN13	YWFCHZZ26136	Cable Assy
CN16	YWFCHZZ20163	Cable Assy
CN17	YW17B085DGE	Cable Assy
CN101	YWD0111N622	10-pin Title ConnectorAssy
M1	YWV9AB0853AN	Upper Cover Assy
M2	YWV9AA0854AN	Bottom Cover Assy
M3	YWV5EA1150A3	Fader Cover
M4	YWV5WA1471A3	Display Panel
M5	YWV7PA0093A3	Badge
M6	YWV5RA0372A3	VR Knob
M7	YWV5RA0334A3	Color Corrector Knob
M8	YWV5RB0335A3	Slide VR Knob
M9	YWV2SA2282A4	Mounting Angle for Hook L
M10	YWV2SA2284A4	Mounting Angle
M14	YWV5WB1397A3	MIC Panel
M15	YWV5JA0089A3	Fader Grip
M16	YWV5GA0141A4	Fader Cap A
M17	YWV5GA0142A4	Fader Cap B
M18	YWV5EA1151A3	Fader Lever Cover
M19	YWV2KA0778A4	Chassis
M20	YWV4HA0192A3	Fader Shaft
M21	YWV4RA0103A4	Lever
M22	YWV2NA0399A4	Spacer
M23	YWV1FA0074A4	Nut
M24	YWV1KA0151A4	Washer
M25	YWV1KA0152A4	Washer
M26	-MASB320	Spacer
M27	YWV5GA0130A4	Tube
M28	YWV2PA0558A3	Insulator
M29	YWV5WA1398A4	Titler Panel
M30	YWV5EA1241A1	Rear Cover
M31	YWV2NA0400A4	Spacer
M32	YWV3BA0091A4	Supporting Angle
M33	YWSR6W1	Cord Clamp
M34	YWTHTMN086	Hinge
M45	YWV7QA2938A4	Main Label for WJ-MX30/A
	YWV7QA2949A4	Main Label for WJ-MX30/B
	YWV7QA2950A4	Main Label for WJ-MX30/G

SWITCH BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB1 (RTL)	YWJKBMX30P1A	Printed Circuit Board Assy	
IC1,2	YWM66310P	IC	
IC3	NJM78L06A	IC	
IC4	NJM79L05A	IC	
Q1-4	2SD1992A	Transistor	
D1-28	SLR34VR90KLM	Diode	
D40-56	SLR34VR90KLM	Diode	
D57-64	MA165	Diode	
D65	1SS99	Diode	
D66	MA165	Diode	
R1-6	ERDS2TJ220	Carbon	22 ohms 1/4W
R7-14	ERDS2TJ104	Carbon	100K ohms 1/4W
R15-18	ERDS2TJ122	Carbon	1.2K ohms 1/4W
R19-32	ERDS2TJ121	Carbon	120 ohms 1/4W
R35-42	ERDS2TJ332	Carbon	3.3K ohms 1/4W
R48	ERDS2TJ221	Carbon	220 ohms 1/4W
R49	ERDS2TJ101	Carbon	100 ohms 1/4W
R50,51	ERDS2TJ332	Carbon	3.3K ohms 1/4W
VR1-4	EVJ02AF20B15	Variable Resistor	100K ohms
VR7	EVJ02AF20A15	Variable Resistor	100K ohms
VR8,9	EVJ02AF20B15	Variable Resistor	100K ohms
VR12,13	YWH0683C1K	Variable Resistor	1K ohms
C1	ECEA1CKA101	Electrolytic	100 µF 16V
C2,3	YWUP05F104ZA	Ceramic	0.1 µF
C5	ECEA0JKA470	Electrolytic	47 µF 6.3V
C6	ECEA1EKA470	Electrolytic	47 µF 25V
C7,8	YWUP05F104ZA	Ceramic	0.1 µF
C9	ECEA1EKA470	Electrolytic	47 µF 25V
C10,11	YWUP05F104ZA	Ceramic	0.1 µF
L1	ELESE100KA	Coil	10 µH
L2,3	ELESE101KA	Coil	10 µH
SW5-20	EVQQTU05R	Push Switch	
SW23-32	EVQQTU05R	Push Switch	
SW41-48	EVQQTU05R	Push Switch	
SW50-52	YW600W01YP2	Push Switch	
SW53-55	YW600W01GP2	Push Switch	
SW56,58	EVQQTU05R	Push Switch	
SW59-65	EVQQTU05R	Push Switch	
J33,34	ERDS2TC0	Jamper Resistor	
J44-47	ERDS2TC0	Jamper Resistor	
CN2	YW530151010	10-pin Connector	
CN4	YW530150510	5-pin Connector	
CN5	YWF795P030LA	30-pin Connector	
CN6	YW524922320	23-pin Connector	
CN14	YW530150310	3-pin Connector	
CN17	YW524921720	17-pin Connector	
CN23	JMI8LH03BBT	3-pin Connector	
CN24	JMI8LH02BBT	2-pin Connector	

AUDIO BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB2 (RTL)	YWJKBMX30P2A	Printed Circuit Board Assy	
IC1,2	YWM5283P	IC	
IC3,4	NJM2068MD	IC	
IC5	YWM5283P	IC	
IC6,7	NJM2068MD	IC	
IC8	YWM5216FP	IC	
Q1	MSB709-QRS	Transistor	
Q2-9	MSD601-QRS	Transistor	
Q10	MSB709-QRS	Transistor	
Q12-15	MSD601-QRS	Transistor	
D1-3	YWDAN212K	Diode	
D29-39	SLR34VR90KLM	LED	
R1,2	YWR1220P223D	Metal	22K ohms 1/10W
R3	YWR1220P124D	Metal	120K ohms 1/10W
R4	YF2116471JT	Carbon	470 ohms 1/10W
R5	YWR1220Q750D	Metal	75 ohms 1/10W
R6	YF2116104JT	Carbon	100K ohms 1/10W
R7	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R8,9	YWR1220P101D	Metal	100 ohms 1/10W
R10	YWR1220P302D	Metal	3K ohms 1/10W
R11	YWR1220P101D	Metal	100 ohms 1/10W
R12,13	YWR1220P302D	Metal	3K ohms 1/10W
R14	YWR1220P101D	Metal	100 ohms 1/10W
R15	YWR1220P302D	Metal	3K ohms 1/10W
R16	YWR1220P473D	Metal	47K ohms 1/10W
R17-20	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R21-23	YWR1220P473D	Metal	47K ohms 1/10W
R24,25	YWR1220P223D	Metal	22K ohms 1/10W
R26	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R27	YWR1220P473D	Metal	47K ohms 1/10W
R28	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R29	YWR1220P153D	Metal	15K ohms
R30	YWR1220P473D	Metal	47K ohms
R31	YWR1220P153D	Metal	15K ohms
R32	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R33	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R34	YF2116104JT	Carbon	100K ohms 1/10W
R35,36	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R38,39	YWR1220P101D	Metal	100 ohms 1/10W
R40,41	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R42-45	YFR1220P203D	Metal	20K ohms 1/10W
R46-48	YWR1220P223D	Metal	22K ohms 1/10W
R49	YWR1220P332D	Metal	3.3K ohms 1/10W
R50,51	YWR1220P333D	Metal	33K ohms 1/10W
R52	YWR1220P223D	Metal	22K ohms 1/10W
R53	YWR1220P102D	Metal	1K ohms 1/10W
R54,55	YWR1220P223D	Metal	22K ohms 1/10W
R56	YWR1220P333D	Metal	33K ohms 1/10W
R57	YWR1220P223D	Metal	22K ohms 1/10W
R58,59	YWR1220P473D	Metal	47K ohms 1/10W
R60,61	YWR1220P102D	Metal	1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION
R62,63	YWR1220P152D	Metal 1.5K ohms 1/10W
R64	YWR1220P153D	Metal 15K ohms 1/10W
R65	YFR1220P104D	Metal 100K ohms 1/10W
R66	YWR1220P153D	Metal 15K ohms 1/10W
R67	YFR1220P104D	Metal 100K ohms 1/10W
R68,69	YWR1220P103D	Metal 10K ohms 1/10W
R70	YF2116104JT	Carbon 100K ohms 1/10W
R71	2116150JT	Carbon 15 ohms 1/10W
R72-75	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R77,78	YWR1220P472D	Metal 4.7K ohms 1/10W
R79,80	ERJ6GEY0R00	Carbon 0 ohms 1/10W
VR1-3	EWAQA1X05C54	Variable Resistor 50K ohms
VR4	EWAQFEX05B15	Variable Resistor 100K ohms
VR5,6	EVM7JGA30B23	Variable Resistor 2K ohms
VR7	EWApFEX05B15	Variable Resistor 100K ohms
C1-4	YF400220CHJT	Ceramic 22 pF
C5-8	YF400101CHJT	Ceramic 100 pF
C9	YWT316B104MT	Ceramic 0.1 µF
C10,11	YF400101CHJT	Ceramic 100 pF
C12	YWT316B104MT	Ceramic 0.1 µF
C13,14	YF400101CHJT	Ceramic 100 pF
C15	YF400680CHJT	Ceramic 68 pF
C16-18	YWT316B104MT	Ceramic 0.1 µF
C19	YF400330CHJT	Ceramic 33 pF
C20	YF400101CHJT	Ceramic 100 pF
C21,22	YWT316B104MT	Ceramic 0.1 µF
C23	YF400330CHJT	Ceramic 33 pF
C24	YF400101CHJT	Ceramic 100 pF
C25	YWT316B104MT	Ceramic 0.1 µF
C26	YF400820CHJT	Ceramic 82 pF
C27	YF400101CHJT	Ceramic 100 pF
C28	YF400820CHJT	Ceramic 82 pF
C29	YWT316B104MT	Ceramic 0.1 µF
C30	YF400101CHJT	Ceramic 100 pF
C31	YWT316B104MT	Ceramic 0.1 µF
C32-36	ECEA1EKA470	Electrolytic 47 µF 25V
C37	ECEA1AKN220	Electrolytic 22 µF 10V
C38	ECEA1EKA470	Electrolytic 47 µF 25V
C39	ECEA1AKN220	Electrolytic 22 µF 10V
C40	ECEA1EKA470	Electrolytic 47 µF 25V
C41	ECEA1AKA220	Electrolytic 22 µF 10V
C42,43	ECEA1AKN220	Electrolytic 22 µF 10V
C44,45	ECEA1EKA470	Electrolytic 47 µF 25V
C46	ECEA1AKA220	Electrolytic 22 µF 10V
C47-51	ECEA1EKA470	Electrolytic 47 µF 25V
C52	ECEA1AKA220	Electrolytic 22 µF 10V
C53-55	ECEA1EKA470	Electrolytic 47 µF 25V
C56	ECEA1HKA100	Electrolytic 10 µF 50V
C60	ECEA1EKA470	Electrolytic 47 µF 25V
C61,62	ECEA1HKN010	Electrolytic 1 µF 50V
C63,64	ECEA1EKA470	Electrolytic 47 µF 25V
C65-68	ECEA1AKN100	Electrolytic 10 µF 10V
C69,70	ECEA1EKN4R7	Electrolytic 4.7 µF 25V
C71	ECEA1ASN100	Electrolytic 10 µF 10V
C72	ECEA1EKN4R7	Electrolytic 4.7 µF 25V
C73	ECEA1ASN100	Electrolytic 10 µF 10V
C74	ECEA1EKN4R7	Electrolytic 4.7 µF 25V
C75-78	ECEA1AKN100	Electrolytic 10 µF 10V
C79	ECEA1EKN4R7	Electrolytic 4.7 µF 25V
C80-82	ECEA1AKN100	Electrolytic 10 µF 10V
C83	ECEA1EKN4R7	Electrolytic 4.7 µF 25V
C84-89	ECEA1AKN100	Electrolytic 10 µF 10V
C90,91	ECEA1AKN470	Electrolytic 47 µF 10V
C92,93	ECEA1EKN100	Electrolytic 10 µF 10V
C94,95	ECEA1EKA470	Electrolytic 47 µF 25V
C96	ECEA1CKN100	Electrolytic 10 µF 16V
C97	ECEA1CSN100	Electrolytic 10 µF 16V
C98	ECEA1HKN4R7	Electrolytic 4.7 µF 50V
C99	YF400183XKT	Ceramic 0.018 µF
C100,101	ECEA0JKA331	Electrolytic 330 µF 6.3V
C102,103	YF400101CHJT	Ceramic 100 pF
C104,105	ECEA1AKN470	Electrolytic 47 µF 10V
L1-3	ELESE101KA	Coil 100 µH
SW1-3	EVQQTU05R	Push Switch
SW33-40	EVQQTU05R	Push Switch
CN6	YW524922320	23-pin Connector
CN7	YW530150410	4-pin Connector
CN8	YW530151210	12-pin Connector
CN10	YWF795P016LA	16-pin Connector
CN17	YW524921720	17-pin Connector

POSITIONER BOARD

PCB3 (RTL)	YWJKCMX30P1A	Printed Circuit Board Assy
VR10	YWRKJXB100KB	Variable Resistor 100K ohms
CN7	YW530150510	5-pin Connector
E1	YW32BM10	Terminal
M35	YWV2HA1094A4	Insulator Sheet

JACK BOARD

PCB4 (RTL)	YWJKCMX30P2A	Printed Circuit Board Assy
VR8	YWRS15H250KA	Variable Resistor 250K ohms
CN80	YW530151210	12-pin Connector
JK1	YWLJ23083090	Jack
JK2	YWLJ23083020	Jack

POWER BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB5 (RTL)	YWJKZMX30E1A	Printed Circuit Board Assy
IC1	YWFA5304P	IC
IC2	YWUPC2412HF	IC
IC3	YWUPC24M12HF	IC
IC4	YWTA76431S	IC
Q3	2SK960	FET
Q4	2SA1244Y	Transistor
Q5	2SA933	Transistor
Q6	2SA1244Y	Transistor
Q7	2SC1740	Transistor
Q8	2SC3377	Transistor
Q9	2SC1740	Transistor
D1 ⚠	YWRBV406	Diode
D2	RU1P	Diode
D3	YWEQA032S	Diode
D4,5	YWERA9102	Diode
D6	MA165	Diode
D7	RD5.1JB2	Diode
D8	YWPC111LY	Diode
D9	YWESAB85M009	Diode
D10	ESAB82M004	Diode
D11	MA165	Diode
D12	YWERA84009	Diode
TH1	YW16D13	Thermistor
VS1	ERZC07DK471U	ZNR
R1	ERC12ZGK105	Solid 1M ohms 1/2W
R2	ERF5TK3R3	Wire Wound 3.3 ohms 5W
R4,5	ERD50FJ104	Carbon 100K ohms 1/2W
R6,7	ERG3SJ103	Metal 10K ohms 3W
R8	ERDS2TJ104	Carbon 100K ohms 1/4W
R9	ERDS2TJ105	Carbon 1M ohms 1/4W
R10	ERDS2TJ220	Carbon 22 ohms 1/4W
R11	ERDS2TJ563	Carbon 56K ohms 1/4W
R12	ERDS2TJ222	Carbon 2.2K ohms 1/4W
R13	ERDS2TJ101	Carbon 100 ohms 1/4W
R14	ERDS2TJ622	Carbon 6.2K ohms 1/4W
R15	ERX2SJR75	Metal 0.75 ohms 2W
R16	ERC12ZGM156	Solid Resistor 15M ohms 1/2W
R17	ERDS1VJ821	Carbon 820 ohms 1/2W
R18	ERDS2TJ100	Carbon 10 ohms 1/4W
R19	ERDS2TJ333	Carbon 33K ohms 1/4W
R20	ERDS2TJ151	Carbon 150 ohms 1/4W
R21	ERDS2TJ332	Carbon 3.3K ohms 1/4W
R22	ERDS2TJ223	Carbon 22K ohms 1/4W
R23	ERDS2TJ683	Carbon 68K ohms 1/4W
R24	ERDS2TJ333	Carbon 33K ohms 1/4W
R25	ERDS2TJ560	Carbon 56 ohms 1/4W
R26	ERDS2TJ102	Carbon 1K ohms 1/4W
R27	ERDS2TJ472	Carbon 4.7K ohms 1/4W
R28,29	ER0S2CKF6801	Metal 6.8K ohms 1/4W
VR1	YFH0621A2R2K	Variable Resistor 2.2K ohms
C1,2	ECQU2A104MV	Plastic 0.1 µF
C3-5	ECKDRS332ME	Ceramic 3300 pF

REF.NO.	PART NO.	DESCRIPTION
C6	EC0S2GA151DA	Electrolytic 150 µF 140V
C7	ECQE6103KZ	Plastic 0.01 µF
C8	ECEA1HU2R2	Electrolytic 2.2 µF 50V
C9	ECEA1HU010	Electrolytic 1 µF 50V (SU)
C10	ECQM1H104JZ	Plastic 0.1 µF 50V
C11	ECQP1H331JZ	Plastic 330P 50V
C12	ECQM1H473JZ	Plastic 0.047 µF 50V
C13	ECQB1H183JZ	Plastic 0.018 µF 50V
C14	ECA1VFQ270	Electrolytic 27 µF 35V
C15,16	ECKDRS332ME	Ceramic 3300 pF
C17	ECA1EFQ102	Electrolytic 1000 µF 25V
C18,19	ECA1CFQ181B	Electrolytic 180 µF 16V
C20	ECA1CFQ471	Electrolytic 470 µF 16V
C21	ECA1AFQ222	Electrolytic 2200 µF 10V
C22	ECA1AFQ122	Electrolytic 1200 µF 10V
C23-25	ECA1AFQ331	Electrolytic 330 µF 10V
C26	ECA1EFQ471	Electrolytic 470 µF 25V
C27	ECQM1H104JZ	Plastic 0.1 µF 50V
C28,29	ECA1CFQ181B	Electrolytic 180 µF 16V
C30	ECEA1AN220S	Electrolytic 22 µF 10V
C31	ECQM1H104JZ	Plastic 0.1 µF 50V
C32	ECA1AFQ331	Electrolytic 330 µF 10V
C33	ECQE6103KZ	Plastic 0.01 µF
L1,2	YWLF4D183	Coil
L3,4	YFBL02RN2R62	Coil 2.6 µH
L5	EL05SI330K	Coil 33 µH
L6-8	YFBL02RN2R62	Coil 2.6 µH
L9	YWPC7330K	Coil 33 µH
L10,11	YWPC10220K	Coil 22 µH
L12	YWPC7330K	Coil 33 µH
L13,14	YFBL02RN2R62	Coil 2.6 µH
T1 ⚠	ETS28BF136AC	Power Transformer
SW1 ⚠	YWSJP4A018BM	Seesaw Switch
F1 ⚠	XBA2C16ET0A	Current Fuse 1.6A 250V
F2 ⚠	SSFR3.15AF02	Current Fuse 3.15A
F3 ⚠	SSFR315F002	Current Fuse 3.15A
F4 ⚠	YWSSFR2AF002	Current Fuse 2A
F5 ⚠	SSFR630F002	Current Fuse 6.3A
F6 ⚠	YWSSFR1AF002	Current Fuse 1A
F7 ⚠	SSFR630F002	Current Fuse 6.3A
F8 ⚠	SSFR1.6A002	Current Fuse 1.6A
CN2	YW530141010	10-pin Connector
CN3	YW530140810	8-pin Connector
CN15	YW53014-0210	2-pin Connector
CN22	YW530140610	6-pin Connector
E1,2	YWTM028B	Terminal
E3,4	S-N5057	Fuse Holder
E5	YWMX5027A	Cable
E8-10	YW851248	Insulator
M36	YWV7DA0351A2	Heat Sink
M37	YWV2SA2452A4	Mounting Angle for Heat Sink
M38	YWV2PA0572A4	Insulator Sheet for Shield Cover
M39	YWV2HA1101B3	Shield Cover
M40	YW5076	Cord Clamp

ANALOG BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB6 (RTL)	YWJKZMX30E2A	Printed Circuit Board Assy
IC5	YWMC141625FU	IC
IC6	YWNJM2246M	IC
IC7	YWMC141625FU	IC
IC8	YWNJM2245M	IC
IC10,11	YWNJM2246M	IC
IC12	YWNJM2245M	IC
IC13	NJM78L05A	IC
IC14	YWM51271FP	IC
IC15	YWNJM3403AM	IC
IC16	YWLM1881M	IC
IC17	NJM78L05A	IC
IC18	NJM319M	IC
IC19	YWM51271FP	IC
IC20	YWNJM3403AM	IC
IC22-32	YWSC7S08F	IC
IC33,34	YWSC7SU04F	IC
IC35	YWNJM2246M	IC
IC36	YWNJM2233BM	IC
IC37	YWNJM2246M	IC
IC38	YWNJM2233BM	IC
IC39	NJM79L05A	IC
IC40	YWTC4W53FL	IC
IC41-44	MC74HC4052F	IC
Q1	2SB642-QRS	Transistor
Q2-19	MSD601-QRS	Transistor
Q21-24	MSD601-QRS	Transistor
Q25	MSB709-QRS	Transistor
Q26,28	MSD601-QRS	Transistor
Q29-35	MSD601-QRS	Transistor
Q36	MSB709-QRS	Transistor
Q37-40	MSD601-QRS	Transistor
Q42-47	MSD601-QRS	Transistor
Q48	2SD1328-RS	Transistor
Q49-59	MSD601-QRS	Transistor
Q60	2SD1328-RS	Transistor
Q61-64	MSD601-QRS	Transistor
Q65	2SD1328-RS	Transistor
Q66-70	MSD601-QRS	Transistor
Q71	2SD1328-RS	Transistor
Q72-82	MSD601-QRS	Transistor
Q83	2SD1328-RS	Transistor
Q84,85	MSD601-QRS	Transistor
Q86	2SD1328-RS	Transistor
Q87,88	MSD601-QRS	Transistor
Q89	2SD1328-RS	Transistor
Q90	MSD601-QRS	Transistor
Q93-97	MSB709-QRS	Transistor
Q98	MSD601-QRS	Transistor
Q99,101	MSB709-QRS	Transistor
Q102	MSB709-QRS	Transistor
Q103	MSD601-QRS	Transistor
Q104,106	MSB709-QRS	Transistor
Q107,108	MSB709-QRS	Transistor
Q109	MSD601-QRS	Transistor
Q110,112	MSB709-QRS	Transistor
Q113	MSD601-QRS	Transistor
Q114,116	MSB709-QRS	Transistor
Q117-130	MSB709-QRS	Transistor
Q131-140	MSD601-QRS	Transistor
Q141	MSB709-QRS	Transistor
Q142	MSD601-QRS	Transistor
Q143	MSB709-QRS	Transistor
Q144	MSD601-QRS	Transistor
Q145	MSB709-QRS	Transistor
Q146	MSD601-QRS	Transistor
Q147	MSB709-QRS	Transistor
Q148-150	MSD601-QRS	Transistor
Q152,153	MSD601-QRS	Transistor
Q154	MSB709-QRS	Transistor
Q155	MSD601-QRS	Transistor
Q156	MSB709-QRS	Transistor
Q157	MSD601-QRS	Transistor
Q158	MSB709-QRS	Transistor
Q159	FMA4	Transistor
Q160	DTB114EK	Transistor
D1,2	MA151K	Diode
R1	ERDS2TJ100	Carbon 10 ohms 1/4W
R2	ERDS2TJ751	Carbon 750 ohms 1/4W
R3	ERDS2TJ331	Carbon 330 ohms 1/4W
R4	ERDS2TJ100	Carbon 10 ohms 1/4W
R5	ERDS2TJ751	Carbon 750 ohms 1/4W
R6	ERDS2TJ331	Carbon 330 ohms 1/4W
R7	ERDS2TJ470	Carbon 47 ohms 1/4W
R8	ERDS2TJ100	Carbon 10 ohms 1/4W
R9	ERDS2TJ470	Carbon 47 ohms 1/4W
R10	ERDS2TJ100	Carbon 10 ohms 1/4W
R11	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R12	ERJ6GEYJ750	Carbon 75 ohms 1/10W
R13	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R14	YF2116753JT	Carbon 75K ohms 1/10W
R15	YF2116122JT	Carbon 1.2K ohms 1/10W
R16	ERJ6GEYJ750	Carbon 75 ohms 1/10W
R17	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R18	YF2116753JT	Carbon 75K ohms 1/10W
R19	YF2116122JT	Carbon 1.2K ohms 1/10W
R20	ERJ6GEYJ750	Carbon 75 ohms 1/10W
R21	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R22	YF2116753JT	Carbon 75K ohms 1/10W
R23	YF2116122JT	Carbon 1.2K ohms 1/10W
R24	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R25	ERJ6GEYJ750	Carbon 75 ohms 1/10W
R26	YF2116122JT	Carbon 1.2K ohms 1/10W
R27	YF2116753JT	Carbon 75K ohms 1/10W
R28	ERJ6GEYJ393	Carbon 39K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R30	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R31,32	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R33	YF2116753JT	Carbon	75K ohms 1/10W
R34	YF2116122JT	Carbon	1.2K ohms 1/10W
R36	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R38	YF2116122JT	Carbon	1.2K ohms 1/10W
R39	YF2116753JT	Carbon	75K ohms 1/10W
R42,44	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R46	ERJ6GEYJ182	Carbon	1.8K ohms 1/10W
R47	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R49	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R50	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R51	YF2116332JT	Carbon	3.3K ohms 1/10W
R52	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R53	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R54	YF2116202JT	Carbon	2K ohms 1/10W
R55	YF2116101JT	Carbon	100 ohms 1/10W
R56,57	ERJ6GEYJ512	Carbon	5.1K ohms 1/10W
R58	YF2116181JT	Carbon	180 ohms 1/10W
R59,60	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R61,62	YF2116152JT	Carbon	1.5K ohms 1/10W
R63	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R64	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R65	YF2116332JT	Carbon	3.3K ohms 1/10W
R66	ERJ8GCSG221	Carbon	220 ohms 1/8W
R69	YF2116912GT	Carbon	9.1K ohms 1/10W
R70,71	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R72	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R73,74	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R75	YF2116912GT	Carbon	9.1K ohms 1/10W
R76	ERJ6GEYJ182	Carbon	1.8K ohms 1/10W
R77,78	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R79	YF2116681JT	Carbon	680 ohms 1/10W
R80	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R82	YWR1220P102D	Metal	1K ohms 1/10W
R83,84	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R86	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R87	YF2116152JT	Carbon	1.5K ohms 1/10W
R88	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R89	YWR1220P512D	Metal	5.1K ohms 1/10W
R90	YF2116332JT	Carbon	3.3K ohms 1/10W
R91	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R92	YF2116332JT	Carbon	3.3K ohms 1/10W
R93	YF2116471JT	Carbon	470 ohms 1/10W
R94	YWR1220P222D	Metal	2.2K ohms 1/10W
R95	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R96	ERJ6GEYJ512	Carbon	5.1K ohms 1/10W
R97,98	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R99	YF2116202JT	Carbon	2K ohms 1/10W
R100	YF2116332JT	Carbon	3.3K ohms 1/10W
R101	YF2116101JT	Carbon	100 ohms 1/10W
R103	YF2116754JT	Carbon	750K ohms 1/10W
R104	YF2116181JT	Carbon	180 ohms 1/10W
R105	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R106	ERJ6GEYJ512	Carbon	5.1K ohms 1/10W
R107	YF2116101JT	Carbon	100 ohms 1/10W
R109	YF2116273GT	Carbon	27K ohms 1/10W
R110	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R111	YF2116474JT	Carbon	470K ohms 1/10W
R113	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R114,115	YF2116152JT	Carbon	1.5K ohms 1/10W
R116	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R117	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R118	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R119	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R120,121	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R122	YF2116332JT	Carbon	3.3K ohms 1/10W
R123,124	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R125	YF2116471JT	Carbon	470 ohms 1/10W
R127	ERJ8GCSG221	Carbon	220 ohms 1/8W
R128	ERJ6GEYJ132	Carbon	1.3K ohms 1/10W
R129,131	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R132	YF2116680JT	Carbon	68 ohms 1/10W
R139	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R142	YF2116912GT	Carbon	9.1K ohms 1/10W
R144	YF2116122JT	Carbon	1.2K ohms 1/10W
R145	YF2116680JT	Carbon	68 ohms 1/10W
R147	YF2116101JT	Carbon	100 ohms 1/10W
R148	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R149	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R150	ERJ6GEYJ100	Carbon	10 ohms 1/10W
R153	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R154	YF2116751JT	Carbon	750 ohms 1/10W
R155	YF2116681JT	Carbon	680 ohms 1/10W
R156	YF2116104JT	Carbon	100K ohms 1/10W
R158	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R159	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R160	YF2116511JT	Carbon	510 ohms 1/10W
R163	YF2116912GT	Carbon	9.1K ohms 1/10W
R164	YF2116101JT	Carbon	100 ohms 1/10W
R165	YWR1220P272D	Metal	2.7K ohms 1/10W
R166	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R168	YWR1220P102D	Metal	1K ohms 1/10W
R169,170	YF2116474JT	Carbon	470K ohms 1/10W
R171	YF2116152JT	Carbon	1.5K ohms 1/10W
R174	YF2116332JT	Carbon	3.3K ohms 1/10W
R175	YF2116104JT	Carbon	100K ohms 1/10W
R177	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R179	YWR1220P512D	Metal	5.1K ohms 1/10W
R180	YF2116392JT	Carbon	3.9K ohms 1/10W
R181	YF2116122JT	Carbon	1.2K ohms 1/10W
R182	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R185	YF2116511JT	Carbon	510 ohms 1/10W
R186	YF2116332JT	Carbon	3.3K ohms 1/10W
R188,190	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R191	ERJ6GEYJ100	Carbon	10 ohms 1/10W
R192	YF2116474JT	Carbon	470K ohms 1/10W
R194	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R196	YF2116471JT	Carbon	470 ohms 1/10W
R197	ERJ6GEYJ102	Carbon	1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R200	YF2116754JT	Carbon	750K ohms 1/10W
R203	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R206	YF2116104JT	Carbon	100K ohms 1/10W
R207	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R208	YF2116101JT	Carbon	100 ohms 1/10W
R209	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R210	YF2116474JT	Carbon	470K ohms 1/10W
R211	YF2116101JT	Carbon	100 ohms 1/10W
R213	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R214	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R215,216	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R217	YF2116433GT	Carbon	43K ohms 1/10W
R218	YF2116471JT	Carbon	470 ohms 1/10W
R219	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R221	ERJ6GEYJ132	Carbon	1.3K ohms 1/10W
R222	YF2116391JT	Carbon	390 ohms 1/10W
R223	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R224	YF2116101JT	Carbon	100 ohms 1/10W
R225	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R226	YF2116122JT	Carbon	1.2K ohms 1/10W
R229	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R231	YF2116754JT	Carbon	750K ohms 1/10W
R234	YF2116681JT	Carbon	680 ohms 1/10W
R236	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R237	YF2116474JT	Carbon	470K ohms 1/10W
R238	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R239	YF2116753JT	Carbon	75K ohms 1/10W
R240	YF2116474JT	Carbon	470K ohms 1/10W
R241	ERJ6GEYJ100	Carbon	10 ohms 1/10W
R242	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R243	YF2116104JT	Carbon	100K ohms 1/10W
R244	ERJ6GEYJ750	Carbon	75 ohms 1/10W
R245	YF2116152JT	Carbon	1.5K ohms 1/10W
R246	YF2116912GT	Carbon	9.1K ohms 1/10W
R247	YF2116153JT	Carbon	15K ohms 1/10W
R249	ERJ6GEYJ510	Carbon	51 ohms 1/10W
R250	YF2116392JT	Carbon	3.9K ohms 1/10W
R251,252	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R253	YF2116202JT	Carbon	2K ohms 1/10W
R254	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R255	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R256	YF2116561JT	Carbon	560 ohms 1/10W
R257	YF2116754JT	Carbon	750K ohms 1/10W
R258-260	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R261	ERJ6GEYJ510	Carbon	51 ohms 1/10W
R262,263	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R264	ERJ6GEYJ100	Carbon	10 ohms 1/10W
R265	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R266	ERJ6GEYJ512	Carbon	5.1K ohms 1/10W
R267	ERJ6GEYJ510	Carbon	51 ohms 1/10W
R268	YF2116331JT	Carbon	330 ohms 1/10W
R269	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R270	YF2116151JT	Carbon	150 ohms 1/10W
R271	ERJ6GEYJ684	Carbon	680K ohms 1/10W
R272	YW2116620JT	Carbon	62 ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R273	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R274	YF2116183GT	Carbon	18K ohms 1/10W
R275	ERJ6GEYJ510	Carbon	51 ohms 1/10W
R277	YF2116202JT	Carbon	2K ohms 1/10W
R278	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R279,280	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R282	YF2116433GT	Carbon	43K ohms 1/10W
R283,284	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R285	YF2116391JT	Carbon	390 ohms 1/10W
R286	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R288	YF2116202JT	Carbon	2K ohms 1/10W
R289	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R290	YF2116392JT	Carbon	3.9K ohms 1/10W
R291	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R293	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R294	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R295	ERJ6GEYJ512	Carbon	5.1K ohms 1/10W
R296	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R297	YF2116222GT	Carbon	2.2K ohms 1/10W
R298	YF2116432JT	Carbon	4.3K ohms 1/10W
R299	YF2116181JT	Carbon	180 ohms 1/10W
R300	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R301	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R302	YF2116202JT	Carbon	2K ohms 1/10W
R303	YF2116332JT	Carbon	3.3K ohms 1/10W
R304,306	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R307	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R308	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R309	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R310	YF2116153JT	Carbon	15K ohms 1/10W
R311	YWR1220P202D	Metal	2K ohms 1/10W
R312	YF2116112JT	Carbon	1.1K ohms 1/10W
R313	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R315	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R316	YF2116222GT	Carbon	2.2K ohms 1/10W
R317	ERJ8GCSG511	Carbon	510 ohms 1/8W
R318	YF2116754JT	Carbon	750K ohms 1/10W
R319	YF2116332JT	Carbon	3.3K ohms 1/10W
R320	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R321	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R322	YF2116332JT	Carbon	3.3K ohms 1/10W
R323,324	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R325	R1220P331D	Metal	330K ohms 1/10W
R326	YF2116123JT	Carbon	12K ohms 1/10W
R327	YF2116202JT	Carbon	2K ohms 1/10W
R328,329	YF2116680JT	Carbon	68 ohms 1/10W
R330	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R331	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R332	YF2116511JT	Carbon	510 ohms 1/10W
R333	YW2116305JT	Carbon	3M ohms 1/10W
R334	YF2116153JT	Carbon	15K ohms 1/10W
R335	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R336	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R337	YF2116202JT	Carbon	2K ohms 1/10W
R338	ERJ6GEYJ102	Carbon	1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R339	YF2116561JT	Carbon	560 ohms 1/10W
R340	YWR1220P202D	Metal	2K ohms 1/10W
R341	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R342	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R343	YF2116754JT	Carbon	750K ohms 1/10W
R344	YWR1220P181D	Metal	180 ohms 1/10W
R345	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R346	YF2116332JT	Carbon	3.3K ohms 1/10W
R347	YF2116511JT	Carbon	510 ohms 1/10W
R348,349	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R350	ERJ6GEYJ512	Carbon	5.1K ohms 1/10W
R351	YF2116511JT	Carbon	510 ohms 1/10W
R352	YW2116620JT	Carbon	62 ohms 1/10W
R353	YWR1220P682D	Metal	6.8K ohms 1/10W
R354	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R355,356	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R358	YF2116331JT	Carbon	330 ohms 1/10W
R359	YF2116332JT	Carbon	3.3K ohms 1/10W
R360	YF2116183GT	Carbon	18K ohms 1/10W
R361	YF2116151JT	Carbon	150 ohms 1/10W
R362	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R363	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R365	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R366	YF2116511JT	Carbon	510 ohms 1/10W
R367	YF2116202JT	Carbon	2K ohms 1/10W
R368,369	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R371	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R373	YF2116202JT	Carbon	2K ohms 1/10W
R374	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R375,376	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R377	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R378	YF2116392JT	Carbon	3.9K ohms 1/10W
R379	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R381	YF2116202JT	Carbon	2K ohms 1/10W
R382	YF2116181JT	Carbon	180 ohms 1/10W
R383,384	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R385	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R386-388	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R390	YF2116332JT	Carbon	3.3K ohms 1/10W
R391	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R392	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R393	YWR1220P202D	Metal	2K ohms 1/10W
R394	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R395	YF2116511JT	Carbon	510 ohms 1/10W
R396,397	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R398	YF2116202JT	Carbon	2K ohms 1/10W
R399	R1220P331D	Metal	330K ohms 1/10W
R400	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R401	YWR1220P202D	Metal	2K ohms 1/10W
R402	YF2116912GT	Carbon	9.1K ohms 1/10W
R403,404	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R405	YWR1220P181D	Metal	180 ohms 1/10W
R406	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R407	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R408	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R409	YF2116332JT	Carbon	3.3K ohms 1/10W
R410	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R411	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R412	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R413,414	YF2116511JT	Carbon	510 ohms 1/10W
R415	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R416	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R417	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R418	YF2116511JT	Carbon	510 ohms 1/10W
R419	YF2116332JT	Carbon	3.3K ohms 1/10W
R420	ERJ6GEYJ510	Carbon	51 ohms 1/10W
R421,422	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R423	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R424	ERJ6GEYJ510	Carbon	51 ohms 1/10W
R425	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R426,427	ERJ6GEYJ510	Carbon	51 ohms 1/10W
R428	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R429	YWR1220P682D	Metal	6.8K ohms 1/10W
R430	YWR1220P512D	Metal	5.1K ohms 1/10W
R431,432	YWR1220P242D	Metal	2.4K ohms 1/10W
R433	YWR1220P162D	Metal	1.6K ohms 1/10W
R434	YWR1220P622D	Metal	6.2K ohms 1/10W
R435	YWR1220P682D	Metal	6.8K ohms 1/10W
R436	YWR1220P512D	Metal	5.1K ohms 1/10W
R437	YWR1220P682D	Metal	6.8K ohms 1/10W
R438	YWR1220P242D	Metal	2.4K ohms 1/10W
R439	YWR1220P162D	Metal	1.6K ohms 1/10W
R440	YWR1220P622D	Metal	6.2K ohms 1/10W
R441	YWR1220P242D	Metal	2.4K ohms 1/10W
R442	YWR1220P682D	Metal	6.8K ohms 1/10W
R444	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R446	YF2116101JT	Carbon	100 ohms 1/10W
R447	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R448	YWR1220P152D	Metal	1.5K ohms 1/10W
R449	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R450	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R451	YF2116101JT	Carbon	100 ohms 1/10W
R452	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R453	YWR1220P152D	Metal	1.5K ohms 1/10W
R454	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R455	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R456	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R457	YF2116432JT	Carbon	4.3K ohms 1/10W
R458	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R459	YF2116332JT	Carbon	3.3K ohms 1/10W
R460,461	YF2116333GT	Carbon	33K ohms 1/10W
R462	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R463,464	YF2116333GT	Carbon	33K ohms 1/10W
R465	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R466,467	YF2116333GT	Carbon	33K ohms 1/10W
R468	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R469,470	YF2116333GT	Carbon	33K ohms 1/10W
R471	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R472	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R473	YF2116473GT	Carbon	47K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION
R474	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R475	YF2116473GT	Carbon 47K ohms 1/10W
R476	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R477	YF2116473GT	Carbon 47K ohms 1/10W
R478	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R479	YF2116473GT	Carbon 47K ohms 1/10W
R480,481	YF2116101JT	Carbon 100 ohms 1/10W
R482,483	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R484,485	YF2116101JT	Carbon 100 ohms 1/10W
R486	YF2116330JT	Carbon 33 ohms 1/10W
R487	YF2116330JT	Carbon 33 ohms 1/10W
R488,489	YF2116101JT	Carbon 100 ohms 1/10W
R490,491	YF2116330JT	Carbon 33 ohms 1/10W
R494	YF2116273GT	Carbon 27K ohms 1/10W
R495,496	YF2116101JT	Carbon 100 ohms 1/10W
R497	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R498	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R499,500	YF2116101JT	Carbon 100 ohms 1/10W
R501,502	YF2116330JT	Carbon 33 ohms 1/10W
R503,504	YF2116101JT	Carbon 100 ohms 1/10W
R505,506	YF2116330JT	Carbon 33 ohms 1/10W
R509	YF2116273GT	Carbon 27K ohms 1/10W
R510,511	YF2116101JT	Carbon 100 ohms 1/10W
R512,513	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R514,515	YF2116101JT	Carbon 100 ohms 1/10W
R516	YF2116330JT	Carbon 33 ohms 1/10W
R517	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R518	YF2116753JT	Carbon 75K ohms 1/10W
R519	YF2116122JT	Carbon 1.2K ohms 1/10W
R520	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R521	YF2116753JT	Carbon 75K ohms 1/10W
R522	YF2116122JT	Carbon 1.2K ohms 1/10W
R523	ERJ6GEYJ750	Carbon 75 ohms 1/10W
R524	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R525	YF2116753JT	Carbon 75K ohms 1/10W
R526	YF2116122JT	Carbon 1.2K ohms 1/10W
R527,528	R1220P151D	Metal 150 ohms 1/10W
R529-532	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R533	YF2116330JT	Carbon 33 ohms 1/10W
R601-604	L311J103J332	Thermistor 3.3K ohms
R605,606	YF2116473GT	Carbon 47K ohms 1/10W
VR5	EVM1DSW30BE3	Variable Resistor 2.2K ohms
VR6	EVM1DSW30BY2	Variable Resistor 330 ohms
VR7	EVM1DSW30BE3	Variable Resistor 2.2K ohms
VR8-11	EVM1DSW30BY2	Variable Resistor 330 ohms
VR13	EVM1DSW30BY2	Variable Resistor 330 ohms
VR14	EVM1DSW30B54	Variable Resistor 50K ohms
VR15	EVM1DSW30B24	Variable Resistor 20K ohms
VR16,17	EVM1DSW30BE3	Variable Resistor 2.2K ohms
VR18	EVM1DSW30BQ3	Variable Resistor 4.7K ohms
VR19	EVM1DSW30B24	Variable Resistor 20K ohms
VR20	EVM1DSW30BY2	Variable Resistor 330 ohms
VR21	EVM1DSW30B54	Variable Resistor 50K ohms
VR22	EVM1DSW30B24	Variable Resistor 20K ohms
VR24	EVM1DSW30BQ3	Variable Resistor 4.7K ohms

REF.NO.	PART NO.	DESCRIPTION
VR25	EVM1DSW30B24	Variable Resistor 20K ohms
VR26	EVM1DSW30BY2	Variable Resistor 330 ohms
VR28,29	EVM1DSW30BE3	Variable Resistor 2.2K ohms
VR30	EVM1DSW30BQ3	Variable Resistor 4.7K ohms
VR31	EVM1DSW30B33	Variable Resistor 3K ohms
C1,2	YWT316B104MT	Ceramic 0.1 µF
C3,4	YF400103XKT	Ceramic 0.01 µF
C5-7	YWT316B104MT	Ceramic 0.1 µF
C9,11	YWT316B104MT	Ceramic 0.1 µF
C12	YWT316B104MT	Ceramic 0.1 µF
C14	YF400070CHDT	Ceramic 7pF
C15	YF400180CHJT	Ceramic 18 pF
C16	YF400680CHJT	Ceramic 68 pF
C17	YF400560CHJT	Ceramic 56 pF
C18	YF400680CHJT	Ceramic 68 pF
C19	YF400151CHJT	Ceramic 150 pF
C20	YWT316B104MT	Ceramic 0.1 µF
C21	YF400102XKT	Ceramic 1000 pF
C22,24	YWT316B104MT	Ceramic 0.1 µF
C25	YF400100CHJT	Ceramic 10 pF
C26,27	YWT316B104MT	Ceramic 0.1 µF
C28	YF400070CHDT	Ceramic 7pF
C29	YWT316B104MT	Ceramic 0.1 µF
C30	YF400222XKT	Ceramic 2200 pF
C31	YF400560CHJT	Ceramic 56 pF
C32	YF400180CHJT	Ceramic 18 pF
C34	YF400151CHJT	Ceramic 150 pF
C35	YF400102XKT	Ceramic 1000 pF
C36	YWT316B104MT	Ceramic 0.1 µF
C37,38	YF400222XKT	Ceramic 2200 pF
C41	YF400103XKT	Ceramic 0.01 µF
C42	YF400100CHJT	Ceramic 10 pF
C43	YF400103XKT	Ceramic 0.01 µF
C44	YWT316B104MT	Ceramic 0.1 µF
C45	YF400103XKT	Ceramic 0.01 µF
C46	YWT316B104MT	Ceramic 0.1 µF
C47	YF400201CHJT	Ceramic 200 pF
C48-50	YWT316B473MT	Ceramic 0.047 µF
C51	YF400102XKT	Ceramic 1000 pF
C52,53	YWT316B104MT	Ceramic 0.1 µF
C54	YF400103XKT	Ceramic 0.01 µF
C55	YF400222XKT	Ceramic 2200 pF
C56	YWT316B104MT	Ceramic 0.1 µF
C57	YF400103XKT	Ceramic 0.01 µF
C58,59	YWT316B104MT	Ceramic 0.1 µF
C60	YF400103XKT	Ceramic 0.01 µF
C61	YF400102XKT	Ceramic 1000 pF
C62,63	YF400220CHJT	Ceramic 22 pF
C64,65	YF400103XKT	Ceramic 0.01 µF
C66	YWT316B104MT	Ceramic 0.1 µF
C67	YF400103XKT	Ceramic 0.01 µF
C68-71	YWT316B104MT	Ceramic 0.1 µF
C72	YF400561CHJT	Ceramic 560 pF
C73	YF400050CHDT	Ceramic 5 pF
C74	YF400103XKT	Ceramic 0.01 µF

REF.NO.	PART NO.	DESCRIPTION	
C75	YF400102XKT	Ceramic	1000 pF
C76	YF400222XKT	Ceramic	2200 pF
C77	YF400103XKT	Ceramic	0.01 µF
C78	YF400201CHJT	Ceramic	200 pF
C79	YF400330CHJT	Ceramic	33 pF
C80	YF400121CHJT	Ceramic	120 pF
C81,82	YWT316B473MT	Ceramic	0.047 µF
C83	YF400102XKT	Ceramic	1000 pF
C84	YF400820CHJT	Ceramic	82 pF
C85-88	YWT316B104MT	Ceramic	0.1 µF
C89	YF400222XKT	Ceramic	2200 pF
C90	YF400102XKT	Ceramic	1000 pF
C91	YWT316B104MT	Ceramic	0.1 µF
C92	YF400330CHJT	Ceramic	33 pF
C93	YWT316B104MT	Ceramic	0.1 µF
C94	YF400102XKT	Ceramic	1000 pF
C95,96	YWT316B104MT	Ceramic	0.1 µF
C97	YF400330CHJT	Ceramic	33 pF
C98	YF400050CHDT	Ceramic	5 pF
C99	YF400101CHJT	Ceramic	100 pF
C100	YF400561CHJT	Ceramic	560 pF
C101	YF400102XKT	Ceramic	1000 pF
C102	YF400222XKT	Ceramic	2200 pF
C103	YF400101CHJT	Ceramic	100 pF
C104	YF400102XKT	Ceramic	1000 pF
C105	YF400330CHJT	Ceramic	33 pF
C106	YF400121CHJT	Ceramic	120 pF
C107	YF400102XKT	Ceramic	1000 pF
C108	YF400330CHJT	Ceramic	33 pF
C109	YF400102XKT	Ceramic	1000 pF
C110	YF400330CHJT	Ceramic	33 pF
C111	YWT316B104MT	Ceramic	0.1 µF
C112	YF400103XKT	Ceramic	0.01 µF
C113	YF400102XKT	Ceramic	1000 pF
C114	YF400330CHJT	Ceramic	33 pF
C115	YF400103XKT	Ceramic	0.01 µF
C116	YF400102XKT	Ceramic	1000 pF
C117,118	YF400103XKT	Ceramic	0.01 µF
C119	ECEA1CKA470	Electrolytic	47 µF 16V
C120	ECEA1AKA470	Electrolytic	47 µF 10V
C121-124	ECEA1AKA101	Electrolytic	100 µF 10V
C125	ECEA1VKS470	Electrolytic	47 µF 35V
C126	ECEA1AKA101	Electrolytic	100 µF 10V
C127	ECEA1CKA470	Electrolytic	47 µF 16V
C128	ECEA1AKA470	Electrolytic	47 µF 10V
C129	ECSF1CE106	Tantalum	10 µF 16V
C130	ECEA1VKS470	Electrolytic	47 µF 35V
C131	ECEA1AKA220	Electrolytic	22 µF 10V
C133	ECEA1AKA470	Electrolytic	47 µF 10V
C134	ECEA1AKA101	Electrolytic	100 µF 10V
C135	ECEA0GKA470	Electrolytic	47 µF 4V
C137	ECEA1AKA101	Electrolytic	100 µF 10V
C138	ECEA1CKA470	Electrolytic	47 µF 16V
C143	ECEA1AKA470	Electrolytic	47 µF 10V
C144	ECEA1CKA470	Electrolytic	47 µF 16V

REF.NO.	PART NO.	DESCRIPTION	
C148	ECEA1AKA220	Electrolytic	22 µF 10V
C151	ECEA1HKAR47	Electrolytic	0.47 µF 50V
C152	ECEA1AKA101	Electrolytic	100 µF 10V
C153	ECEA1HKA010	Electrolytic	1 µF 50V
C154	ECEA1AKA101	Electrolytic	100 µF 10V
C155	ECEA1CKA470	Electrolytic	47 µF 16V
C157	ECEA1HKA010	Electrolytic	1 µF 50V
C158	ECEA1HKAR47	Electrolytic	0.47 µF 50V
C160	ECEA1AKA220	Electrolytic	22 µF 10V
C161	ECEA0JKA470	Electrolytic	47 µF 6.3V
C164	ECEA1AKA220	Electrolytic	22 µF 10V
C165	ECEA1CKA220	Electrolytic	22 µF 16V
C166	ECEA1AKA470	Electrolytic	47 µF 10V
C167	ECEA1EKA4R7	Electrolytic	0.47 µF 25V
C168	ECEA0JKA470	Electrolytic	47 µF 6.3V
C170,171	ECEA1HKA010	Electrolytic	1 µF 50V
C172	ECEA1AKA470	Electrolytic	47 µF 10V
C173	ECEA1HKA010	Electrolytic	1 µF 50V
C174	ECEA1VKS470	Electrolytic	47 µF 35V
C175	ECEA1CKA220	Electrolytic	22 µF 16V
C176	ECEA1HKA010	Electrolytic	1 µF 50V
C177	ECEA0JKA470	Electrolytic	47 µF 6.3V
C178	ECEA1HKAR47	Electrolytic	0.47 µF 50V
C179	ECEA1HKS3R3	Electrolytic	3.3 µF 50V
C180	ECEA0JKA470	Electrolytic	47 µF 6.3V
C181	ECEA1AKA101	Electrolytic	100 µF 10V
C182	ECEA1VKS470	Electrolytic	47 µF 35V
C183	ECEA1CKA470	Electrolytic	47 µF 16V
C184	ECEA1CKA101	Electrolytic	100 µF 16V
C185-187	ECEA1AKA101	Electrolytic	100 µF 10V
C188	ECEA1AKA220	Electrolytic	22 µF 10V
C189	ECEA1EKA4R7	Electrolytic	4.7 µF 25V
C190	ECEA1VKS470	Electrolytic	47 µF 35V
C191	ECEA1CKA101	Electrolytic	100 µF 16V
C192	ECEA1CKA220	Electrolytic	22 µF 16V
C193	ECEA0JKA470	Electrolytic	47 µF 6.3V
C194	ECEA1HKA010	Electrolytic	1 µF 50V
C195	ECEA1AKA101	Electrolytic	100 µF 10V
C196	ECEA1HKA010	Electrolytic	1 µF 50V
C197	ECEA0JKA470	Electrolytic	47 µF 6.3V
C198	ECEA1CKA101	Electrolytic	100 µF 16V
C199	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C200	ECEA0JKA470	Electrolytic	47 µF 6.3V
C201	ECEA1VKS470	Electrolytic	47 µF 35v
C202	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C203	ECEA0JKA470	Electrolytic	47 µF 6.3V
C204	ECEA1VKS470	Electrolytic	47 µF 35V
C205	ECEA1AKA101	Electrolytic	100 µF 10V
C206	ECEA1CKA101	Electrolytic	100 µF 16V
C207	ECEA1AKA470	Electrolytic	47 µF 10V

REF.NO.	PART NO.	DESCRIPTION	
C208	ECEA1VKS470	Electrolytic	47 µF 35V
C209	ECEA1AKA101	Electrolytic	100 µF 10V
C210	ECEA1CKA101	Electrolytic	100 µF 16V
C211	ECEA1AKA101	Electrolytic	100 µF 10V
C212	ECEA0JKA470	Electrolytic	47 µF 6.3V
C213	ECEA1CKA101	Electrolytic	100 µF 16V
C214	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C215	ECEA0JKA470	Electrolytic	47 µF 6.3V
C216	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C217	ECEA0JKA470	Electrolytic	47 µF 6.3V
C218	ECEA1CKA220	Electrolytic	22 µF 16V
C219	ECEA1AKA101	Electrolytic	100 µF 10V
C220-222	ECEA1AKN100	Electrolytic	10 µF 10V
C223	ECEA1CKN4R7	Electrolytic	4.7 µF 16V
C224-226	ECEA1AKN100	Electrolytic	10 µF 10V
C227	ECEA1HKS3R3	Electrolytic	3.3 µF 50V
C228,229	ECSF1CE106	Tantalum	10 µF 16V
C230,231	ECSF1HE474	Tantalum	0.47 µF 50V
C232,233	ECSF1HE105	Tantalum	1 µF 50V
C234	ECEA1HKAR47	Electrolytic	4.7 µF 50V
C235,236	ECSF1EE226	Tantalum	22 µF 25V
C237,238	ECEA1AKA101	Electrolytic	100 µF 10V
C239,240	ECSF1EE226	Tantalum	22 µF 25V
C241,242	ECEA1AKA101	Electrolytic	10 µF 10V
C243	ECSF1CE106	Tantalum	10 µF 16V
C244	ECSF1EE106	Tantalum	10 µF 25V
C245-248	ECSF1CE106	Tantalum	10 µF 16V
C249,250	ECSF1CE336	Tantalum	33 µF 16V
C251-254	ECSF1CE106	Tantalum	10 µF 16V
C255,256	ECSF1CE336	Tantalum	33 µF 16V
C257-260	ECSF1CE106	Tantalum	10 µF 16V
C261	ECEA1AKA101	Electrolytic	100 µF 10V
C262	YF400222XKT	Ceramic	2200 pF
C263-268	ECEA1CKA470	Electrolytic	47 µF 16V
C269-272	ECEA1CKN100	Electrolytic	10 µF 16V
C273	YWT316B104MT	Ceramic	0.1 µF
C274	ECEA1CKA470	Electrolytic	47 µF 16V
C275	ECSF1EE106	Tantalum	10 µF 25V
C276	ECEA1CKA470	Electrolytic	47 µF 16V
C277	YF400103XKT	Ceramic	0.01 µF
C278	ECEA1CKA470	Electrolytic	47 µF 16V
C279	YF400103XKT	Ceramic	0.01 µF
C280	ECEA1AKA101	Electrolytic	100 µF 10V
C281,282	ECEA1CKA470	Electrolytic	47 µF 16V
C283,284	YF400103XKT	Ceramic	0.01 µF
C285	ECEA1EKA470	Electrolytic	47 µF 25V
C286,287	YWT316B104MT	Ceramic	0.1 µF
C288	ECEA1AKA470	Electrolytic	47 µF 10V
C289	ECEA1CKA470	Electrolytic	47 µF 16V
C290	YF400103XKT	Ceramic	0.01 µF
C291	ECEA1CKA470	Electrolytic	47 µF 16V
C292	YF400103XKT	Ceramic	0.01 µF
C293,294	ECEA1AKA101	Electrolytic	100 µF 10V
C295	YF400103XKT	Ceramic	0.01 µF
C296	YWT316B104MT	Ceramic	0.1 µF
C297	YF400331CHJT	Ceramic	330 pF
C298,299	YF400330CHJT	Ceramic	33 pF
C302,303	YF400680CHJT	Ceramic	68 pF
C304,305	YF400300CHJT	Ceramic	30 pF
C306	ECCF1H101JC	Ceramic	100 pF 50V
C307	ECCF1H220JC	Ceramic	22 pF 50V
C308	ECCF1H101JC	Ceramic	100 pF 50V
C309	ECCF1H220JC	Ceramic	22 pF 50V
C310,311	ECCF1H101JC	Ceramic	100 pF 50V
CT1,2	YFTZ03R200FR	Trimmer Capacitor	20 pF
L1,2	ELC08D082	Coil	56 µH
L3	ELESE1R0KA	Coil	1 µH
L4	ELESE180KA	Coil	18 µH
L5	ELESE6R8KA	Coil	6.8 µH
L6-9	ELESE1R0KA	Coil	1 µH
L10	ELESE180KA	Coil	18 µH
L11	ELESE6R8KA	Coil	6.8 µH
L13,14	ELESE1R0KA	Coil	1 µH
L16	ELESE1R0KA	Coil	1 µH
L17-20	ELESE101KA	Coil	100 µH
L21	ELC08D082	Coil	56 µH
X1,2	YFMS30917M10	Crystal Oscillator	
CF1,2	YWYS40075	Filter	
CF3	YWYS30030	Filter	
CF4,5	YWYS40075	Filter	
CF6	YWYS30030	Filter	
CF7	YWYS40030	Filter	
CF8,9	YWYS30031	Filter	
CF10	YWYS40030	Filter	
CF11,12	YWYS30031	Filter	
CF13	YWYS40075	Filter	
CF14	YWYS30030	Filter	
CF15	YWYS40075	Filter	
CF16	YWYS30030	Filter	
CF21	YWY5G0382	Filter	
CN11	YWF794P040LA	40-pin Connector	
CN13	YWF794P026LA	26-pin Connector	
CN16	YWF794P020LA	20-pin Connector	
CN22	YW530140610	6-pin Connector	
TP1-19	YWRCS3216TPV	Test Point	
M11	YWV2HA1100A1	Shield Cover	
M12	YWV2SA2451A3	Mounting Angle	
M41	YWV2HA1098A1	Shield Parts	
M42	YWV2HA1099A2	Bottom Shield Case	

DIGITAL BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB7 (RTL)	YWJKZMX30E3A	Printed Circuit Board Assy	
IC1,2	NJM78L05A	IC	
IC3	YWCXD1175AM	IC	
IC4	MC74HC4053F	IC	
IC5	YWCXD1175AM	IC	
IC6	NJM2904M	IC	
IC7	MN53060LBY2	IC	
IC8	YWCXD1175AM	IC	
IC9	MC74HC4053F	IC	
IC10-12	YWM5M4C500AL	IC	
IC13	YWCXD1175AM	IC	
IC14	NJM2904M	IC	
IC15	YWUPD42102G3	IC	
IC17,18	YWM5M4C500AL	IC	
IC19	NJM78L05A	IC	
IC21	YWM5M4C500AL	IC	
IC22	YWL7A0946	LSI	
IC23	YWPD65012C25	IC	
IC24	YWUPD42102G3	IC	
IC25	MN53060LBY2	IC	
IC26	MC74HC4053F	IC	
IC27	YWM5M4C500AL	IC	
IC28	NJM78L05A	IC	
IC29	YWM5M4C500AL	IC	
IC30	MN676021PPS	IC	
IC31	YWM5M4C500AL	IC	
IC32	YWPD65012C25	IC	
IC33,34	YWM5M4C500AL	IC	
IC35	MN676021PPS	IC	
IC36	YWM5M4C500AL	IC	
IC37	YWL7A1077	LSI	
IC38	MC74HC374AF	IC	
IC39	YWUPD42102G3	IC	
IC40	YWMC74AC374M	IC	
IC41	YWUPD42102G3	IC	
IC42	YWPD65082067	IC	
IC43	YWUPD91361	IC	
IC44	MC74HC374AF	IC	
IC45	YWMC74AC374M	IC	
IC46	NJM319M	IC	
IC47	YWNJM78L09A	IC	
IC48,50	YWSC7S08F	IC	
IC51,52	YWSC7S08F	IC	
IC53,54	YWSC7SU04F	IC	
IC56-58	YWSC7SU04F	IC	
IC59	YWM51953AFP	IC	
IC60	YWH7532F0MX1	IC	
IC61	YWMC145407F	IC	
IC62	NJM2904M	IC	
IC63	NJM78L06A	IC	
IC64	YWUPC4064G2	IC	
IC65	YWSC7SU04F	IC	
IC66	YWUPD4538BG	IC	
IC67	NJU4051BM	IC	
IC68	NJU4053BM	IC	
IC69	YWSC7S32FER	IC	
IC70	YWM51955AFT1	IC	
IC72,73	YWSC7S08F	IC	
Q14	2SA1733	Transistor	
Q15-21	2SK198-Q	FET	
Q22	MSD601-QRS	Transistor	
Q23	2SD1328-RS	Transistor	
Q24-28	MSD601-QRS	Transistor	
Q29	2SD1328-RS	Transistor	
Q30-34	MSD601-QRS	Transistor	
Q35-40	MSB709-QRS	Transistor	
Q41	2SA1733	Transistor	
Q42	MSD601-QRS	Transistor	
Q44	2SB710-QRS	Transistor	
Q45	MSB709-QRS	Transistor	
D1,2	1SS99	Diode	
D3-13	1SV153	Diode	
D14	YWDAN212K	Diode	
D15,16	YWRB421D	Diode	
D17	MA8033	Diode	
D18,19	MA151K	Diode	
R1	YF2116331JT	Carbon	330 ohms 1/10W
R2	YF2116511JT	Carbon	510 ohms 1/10W
R3	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R4	YF2116331JT	Carbon	330 ohms 1/10W
R5	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R6-10	YF2116101JT	Carbon	100 ohms 1/10W
R11	YF2116331JT	Carbon	330 ohms 1/10W
R12,13	YF2116101JT	Carbon	100 ohms 1/10W
R14	YF2116331JT	Carbon	330 ohms 1/10W
R15	YF2116101JT	Carbon	100 ohms 1/10W
R16	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R17	YF2116112JT	Carbon	1.1K ohms 1/10W
R18	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R19	YF2116101JT	Carbon	100 ohms 1/10W
R20	YF2116222GT	Carbon	2.2K ohms 1/10W
R21	YF2116511JT	Carbon	510 ohms 1/10W
R22	YF2116202JT	Carbon	2K ohms 1/10W
R23	YF2116101JT	Carbon	100 ohms 1/10W
R24	YF2116821GT	Carbon	820 ohms 1/10W
R25-31	YF2116101JT	Carbon	100 ohms 1/10W
R32	YF2116332JT	Carbon	3.3K ohms 1/10W
R33	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R34	YF2116332JT	Carbon	3.3K ohms 1/10W
R35	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R36	YF2116101JT	Carbon	100 ohms 1/10W
R37	YF2116333GT	Carbon	33K ohms 1/10W
R38	YF2116331JT	Carbon	330 ohms 1/10W
R39	YF2116104JT	Carbon	100K ohms 1/10W
R40	YF2116101JT	Carbon	100 ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R41	YF2116331JT	Carbon	330 ohms 1/10W
R42	YF2116104JT	Carbon	100K ohms 1/10W
R43	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R44	YF2116752JT	Carbon	7.5K ohms 1/10W
R45	YF2116331JT	Carbon	330 ohms 1/10W
R46	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R47	YF2116511JT	Carbon	510 ohms 1/10W
R48	YF2116331JT	Carbon	330 ohms 1/10W
R49	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R50	YF2116511JT	Carbon	510 ohms 1/10W
R51-58	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R59	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R60	YF2116331JT	Carbon	330 ohms 1/10W
R61-74	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R75	YF2116392JT	Carbon	3.9K ohms 1/10W
R76-84	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R85	YF2116331JT	Carbon	330 ohms 1/10W
R86	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R87-89	YF2116101JT	Carbon	100 ohms 1/10W
R90	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R91	YF2116331JT	Carbon	330 ohms 1/10W
R92,93	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R95-97	YF2116101JT	Carbon	100 ohms 1/10W
R98	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R99	YF2116112JT	Carbon	1.1K ohms 1/10W
R100	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R101,102	YF2116101JT	Carbon	100 ohms 1/10W
R103-111	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R112	YF2116222GT	Carbon	2.2K ohms 1/10W
R113	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R114	YF2116101JT	Carbon	100 ohms 1/10W
R115,116	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R118	YF2116511JT	Carbon	510 ohms 1/10W
R120,121	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R124-127	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R129	YF2116202JT	Carbon	2K ohms 1/10W
R131,135	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R138,141	YF2116101JT	Carbon	100 ohms 1/10W
R146,148	YF2116101JT	Carbon	100 ohms 1/10W
R149	YF2116821GT	Carbon	820 ohms 1/10W
R150,151	YF2116101JT	Carbon	100 ohms 1/10W
R156,159	YF2116101JT	Carbon	100 ohms 1/10W
R163	YF2116332JT	Carbon	3.3K ohms 1/10W
R171	YF2116104JT	Carbon	100K ohms 1/10W
R175	YF2116101JT	Carbon	100 ohms 1/10W
R176	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R177	YF2116104JT	Carbon	100K ohms 1/10W
R178	YF2116333GT	Carbon	33K ohms 1/10W
R179	YF2116332JT	Carbon	3.3K ohms 1/10W
R180	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R181,182	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R183-185	YF2116331JT	Carbon	330 ohms 1/10W
R186	YF2116561JT	Carbon	560 ohms 1/10W
R187	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R188-191	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R192	YF2116752JT	Carbon	7.5K ohms 1/10W
R193,194	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R195	YF2116331JT	Carbon	330 ohms 1/10W
R196	YF2116511JT	Carbon	510 ohms 1/10W
R197	YF2116104JT	Carbon	100K ohms 1/10W
R198	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R199	YF2116331JT	Carbon	330 ohms 1/10W
R200,201	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R202	YF2116104JT	Carbon	100K ohms 1/10W
R203-206	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R207	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R209-210	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R211	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R212	YF2116104JT	Carbon	100K ohms 1/10W
R213	YF2116511JT	Carbon	510 ohms 1/10W
R214	YF2116331JT	Carbon	330 ohms 1/10W
R215	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R216	YF2116511JT	Carbon	510 ohms 1/10W
R217	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R218	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R219	YF2116511JT	Carbon	510 ohms 1/10W
R220	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R221-229	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R230	YF2116392JT	Carbon	3.9K ohms 1/10W
R231	YF2116332JT	Carbon	3.3K ohms 1/10W
R232-236	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R237	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R238,239	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R240	YF2116104JT	Carbon	100K ohms 1/10W
R241	YF2116101JT	Carbon	100 ohms 1/10W
R242-251	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R252	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R254	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R255	YF2116104JT	Carbon	100K ohms 1/10W
R256	YF2116183GT	Carbon	18K ohms 1/10W
R257	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R258	YF2116752JT	Carbon	7.5K ohms 1/10W
R260	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R261,262	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R263	YF2116752JT	Carbon	7.5K ohms 1/10W
R264	YF2116101JT	Carbon	100 ohms 1/10W
R265,266	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R267-269	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R270	YF2116332JT	Carbon	3.3K ohms 1/10W
R272	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R273	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R274	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R275	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R276	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R277	YF2116332JT	Carbon	3.3K ohms 1/10W
R278-280	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R281	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R282	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R283	YF2116332JT	Carbon	3.3K ohms 1/10W
R284	ERJ6GEYJ221	Carbon	220 ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R285	ERJ6GEY0R00	Carbon	0ohms 1/10W
R286	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R287	YF2116511JT	Carbon	510 ohms 1/10W
R288	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R289	YF2116511JT	Carbon	510 ohms 1/10W
R290,291	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R292,293	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R294,296	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R297-299	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R301,304	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R305-310	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R311	YF2116511JT	Carbon	510 ohms 1/10W
R312-314	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R318	YF2116511JT	Carbon	510 ohms 1/10W
R319,320	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R321	YF2116511JT	Carbon	510 ohms 1/10W
R322	YF2116104JT	Carbon	100K ohms 1/10W
R323,324	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R325	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R326-331	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R333	YF2116331JT	Carbon	330 ohms 1/10W
R334	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R335,336	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R337	YF2116203JT	Carbon	20K ohms 1/10W
R338	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R339	YF2116101JT	Carbon	100 ohms 1/10W
R340	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R341	YF2116104JT	Carbon	100K ohms 1/10W
R343	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R344-350	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R351	YF2116331JT	Carbon	330 ohms 1/10W
R352	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R353,354	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R355	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R356	YF2116104JT	Carbon	100K ohms 1/10W
R357	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R358	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R363	YF2116104JT	Carbon	100K ohms 1/10W
R364	YF2116332JT	Carbon	3.3K ohms 1/10W
R365	YF2116331JT	Carbon	330 ohms 1/10W
R366	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R367,368	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R369-422	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R423	YF2116101JT	Carbon	100 ohms 1/10W
R424	ERJ6GEYJ105	Carbon	1M ohms 1/10W
R425,426	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R427	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R428	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R429	YF2116511JT	Carbon	510 ohms 1/10W
R430	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R431	YF2116332JT	Carbon	3.3K ohms 1/10W
R432	YF2116331JT	Carbon	330 ohms 1/10W
R433	YF2116752JT	Carbon	7.5K ohms 1/10W
R434	YF2116333GT	Carbon	33K ohms 1/10W
R435	YF2116331JT	Carbon	330 ohms 1/10W
R436-438	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R439	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R440-451	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R452	YF2116511JT	Carbon	510 ohms 1/10W
R453	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R454	YF2116101JT	Carbon	100 ohms 1/10W
R455,456	ERJ6GEYJ221	Carbon	220 ohms 1/10W
R457	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R458	YF2116511JT	Carbon	510 ohms 1/10W
R459	YF2116153JT	Carbon	15K ohms 1/10W
R460	YF2116203JT	Carbon	20K ohms 1/10W
R461	YF2116511JT	Carbon	510 ohms 1/10W
R462	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R463,464	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R465	YF2116511JT	Carbon	510 ohms 1/10W
R466	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R467	YF2116511JT	Carbon	510 ohms 1/10W
R468	YF2116222GT	Carbon	2.2K ohms 1/10W
R469	YF2116362GT	Carbon	3.6K ohms 1/10W
R470	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R471	YF2116222GT	Carbon	2.2K ohms 1/10W
R472	YF2116331JT	Carbon	330 ohms 1/10W
R473	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R474	YF2116331JT	Carbon	330 ohms 1/10W
R475	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R478-482	YF2116331JT	Carbon	330 ohms 1/10W
R483	YF2116471JT	Carbon	470 ohms 1/10W
R484	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R485	YF2116331JT	Carbon	330 ohms 1/10W
R486	YF2116471JT	Carbon	470 ohms 1/10W
R487,488	YF2116331JT	Carbon	330 ohms 1/10W
R489	YF2116222GT	Carbon	2.2K ohms 1/10W
R490-493	YF2116331JT	Carbon	330 ohms 1/10W
R494	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R495	YF2116331JT	Carbon	330 ohms 1/10W
R496	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R497,499	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R500,501	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R502	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R503	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R504	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R507	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R510	YF2116101JT	Carbon	100 ohms 1/10W
R512,513	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R514	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R515,517	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R520	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R521	YF2116222GT	Carbon	2.2K ohms 1/10W
R522,525	YF2116331JT	Carbon	330 ohms 1/10W
R526-545	YF2116331JT	Carbon	330 ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R546	YF2116101JT	Carbon	100 ohms 1/10W
R547,548	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R549	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R550	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R551	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R552-555	YF2116331JT	Carbon	330 ohms 1/10W
R558	YFR1220P104D	Metal	100K ohms 1/10W
R559-567	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R569	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R570	ERJ6GEYJ182	Carbon	1.8K ohms 1/10W
R571	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R573	YF2116101JT	Carbon	100 ohms 1/10W
R575	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R576	YF2116331JT	Carbon	330 ohms 1/10W
R577-579	YF2116473GT	Carbon	47K ohms 1/10W
R580,583	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R584,587	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R588,589	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R590-592	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R593	YF2116511JT	Carbon	510 ohms 1/10W
R594-597	YF2116331JT	Carbon	330 ohms 1/10W
R601	YF2116222GT	Carbon	2.2K ohms 1/10W
R603	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R605,606	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R607,608	YF2116392JT	Carbon	3.9K ohms 1/10W
R609,610	ERDS2FJ331	Carbon	330 ohms 1/4W
VR1	EVM1DSW30B14	Variable Resistor	10K ohms
Z1-4	YWRKM10L102F	Block Resistor	
Z5-9	EXBF9E103J	Block Resistor	
Z10	YWRKM10L503F	Block Resistor	
C315	YF400330CHJT	Ceramic	33 pF
C316,317	YWT316B104MT	Ceramic	0.1 µF
C318	YF400220CHJT	Ceramic	22 pF
C319	YF400330CHJT	Ceramic	33 pF
C320	YF400220CHJT	Ceramic	22 pF
C321	YF400101CHJT	Ceramic	100 pF
C322	YF400333XKT	Ceramic	0.033 µF
C323	YF400680CHJT	Ceramic	68 pF
C324	YF400333XKT	Ceramic	0.033 µF
C325	YWT316B104MT	Ceramic	0.1 µF
C326	YF400330CHJT	Ceramic	33 pF
C327	YF400220CHJT	Ceramic	22 pF
C328	YWT316B104MT	Ceramic	0.1 µF
C329	YF400220CHJT	Ceramic	22 pF
C330	YF400330CHJT	Ceramic	33 pF
C331	YF400102XKT	Ceramic	1000 pF
C332	YF400680CHJT	Ceramic	68 pF
C333-335	YF400333XKT	Ceramic	0.033 µF
C336,337	YWT316B104MT	Ceramic	0.1 µF
C338	YF400333XKT	Ceramic	0.033 µF
C339	YWT316B104MT	Ceramic	0.1 µF
C340	YF400390CHJT	Ceramic	39 pF
C341	YF400330CHJT	Ceramic	33 pF
C342	YF400101CHJT	Ceramic	100 pF
C343	YF400270CHJT	Ceramic	27 pF

REF.NO.	PART NO.	DESCRIPTION	
C344	YF400561CHJT	Ceramic	560pF
C345	YF400330CHJT	Ceramic	33 pF
C346	YF400332XKT	Ceramic	3300 pF
C347	YF400103XKT	Ceramic	0.01 F
C348	YF400330CHJT	Ceramic	33 pF
C349	YF400220CHJT	Ceramic	22 pF
C350	YF400101CHJT	Ceramic	100 pF
C351,352	YWT316B104MT	Ceramic	0.1 µF
C353	YF400220CHJT	Ceramic	22 pF
C354	YF400101CHJT	Ceramic	100 pF
C355,356	YF400333XKT	Ceramic	0.033 µF
C357	YF400680CHJT	Ceramic	68 pF
C358	YWT316B104MT	Ceramic	0.1 µF
C359	YF400220CHJT	Ceramic	22 pF
C360,361	YF400330CHJT	Ceramic	33 pF
C362	YWT316B104MT	Ceramic	0.1 µF
C363	YF400220CHJT	Ceramic	22 pF
C364	YF400102XKT	Ceramic	1000 pF
C365	YWT316B104MT	Ceramic	0.1 µF
C366	YF400680CHJT	Ceramic	68 pF
C367	YWT316B104MT	Ceramic	0.1 µF
C368	YF400333XKT	Ceramic	0.033 µF
C369	YWT316B104MT	Ceramic	0.1 µF
C371	YF400333XKT	Ceramic	0.033 µF
C372	YWT316B104MT	Ceramic	0.1 µF
C373	YF400333XKT	Ceramic	0.033 µF
C377,379	YWT316B104MT	Ceramic	0.1 µF
C382	YWT316B104MT	Ceramic	0.1 µF
C383	YF400333XKT	Ceramic	0.033 µF
C385,392	YWT316B104MT	Ceramic	0.1 µF
C394	YWT316B104MT	Ceramic	0.1 µF
C397	YF400390CHJT	Ceramic	39 pF
C398	YWT316B104MT	Ceramic	0.1 µF
C401	YF400201CHJT	Ceramic	200 pF
C402,403	YWT316B104MT	Ceramic	0.1 µF
C404,405	YF400101CHJT	Ceramic	100 pF
C406,407	YWT316B104MT	Ceramic	0.1 µF
C408	YF400101CHJT	Ceramic	100 pF
C409	YWT316B104MT	Ceramic	0.1 µF
C410	YF400270CHJT	Ceramic	27 pF
C411	YF400561CHJT	Ceramic	560 pF
C412	YF400101CHJT	Ceramic	100 pF
C413	YF400332XKT	Ceramic	3300 pF
C415	YWT316B104MT	Ceramic	0.1 µF
C416	YF400330CHJT	Ceramic	33 pF
C417	YWT316B104MT	Ceramic	0.1 µF
C418	YF400101CHJT	Ceramic	100 pF
C419	YF400103XKT	Ceramic	0.01 µF
C420,421	YF400330CHJT	Ceramic	33 pF
C422	YF400121CHJT	Ceramic	120 pF
C423	YF400330CHJT	Ceramic	33 pF
C424,425	YWT316B104MT	Ceramic	0.1 µF
C426,427	YF400330CHJT	Ceramic	33 pF
C428,429	YWT316B104MT	Ceramic	0.1 µF
C430	YF400103XKT	Ceramic	0.01 µF

REF.NO.	PART NO.	DESCRIPTION	
C431,432	YWT316B104MT	Ceramic	0.1 µF
C433	YF400101CHJT	Ceramic	100 pF
C434	YF400390CHJT	Ceramic	39 pF
C435	YF400201CHJT	Ceramic	200 pF
C436,437	YF400101CHJT	Ceramic	100 pF
C438,439	YWT316B104MT	Ceramic	0.1 µF
C440	YF400103XKT	Ceramic	0.01 µF
C441-444	YWT316B104MT	Ceramic	0.1 µF
C445	YF400390CHJT	Ceramic	39 pF
C446	YF400103XKT	Ceramic	0.01 µF
C448-454	YWT316B104MT	Ceramic	0.1 µF
C455,457	YF400390CHJT	Ceramic	39 pF
C458,459	YWT316B104MT	Ceramic	0.1 µF
C460	YF400101CHJT	Ceramic	100 pF
C461	YWT316B104MT	Ceramic	0.1 µF
C462	YF400201CHJT	Ceramic	200 pF
C463	YF400101CHJT	Ceramic	100 pF
C464	YWT316B104MT	Ceramic	0.1 µF
C465,466	YF400101CHJT	Ceramic	100 pF
C467-469	YWT316B104MT	Ceramic	0.1 µF
C470	YF400330CHJT	Ceramic	33 pF
C471	YF400103XKT	Ceramic	0.01 µF
C472	YF400820CHJT	Ceramic	82 pF
C473,474	YWT316B104MT	Ceramic	0.1 µF
C475,476	YF400101CHJT	Ceramic	100 pF
C477-483	YWT316B104MT	Ceramic	0.1 µF
C484	YF400270CHJT	Ceramic	27 pF
C485	YWT316B104MT	Ceramic	0.1 µF
C486	YF400561CHJT	Ceramic	560 pF
C487	YF400332XKT	Ceramic	3300 pF
C488-491	YWT316B104MT	Ceramic	0.1 µF
C492	YF400820CHJT	Ceramic	82 pF
C493	YF400330CHJT	Ceramic	33 pF
C494	YWT316B104MT	Ceramic	0.1 µF
C495,496	YF400330CHJT	Ceramic	33 pF
C498	YF400330CHJT	Ceramic	33 pF
C499	YF400390CHJT	Ceramic	39 pF
C500,501	YF400330CHJT	Ceramic	33 pF
C503	YWT316B104MT	Ceramic	0.1 µF
C504	YF400330CHJT	Ceramic	33 pF
C505	YWT316B104MT	Ceramic	0.1 µF
C506	YF400221CHJT	Ceramic	220 pF
C507	YF400101CHJT	Ceramic	100 pF
C508-510	YWT316B104MT	Ceramic	0.1 µF
C511	YF400101CHJT	Ceramic	100 pF
C512,513	YWT316B104MT	Ceramic	0.1 µF
C515	ECEA0JKA470	Electrolytic	47 µF 6.3V
C516,517	ECEA1AKS330	Electrolytic	33 µF 10V (KA)
C518	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C519	ECEA1AKA101	Electrolytic	100 µF 10V
C520	ECEA1AKA220	Electrolytic	22 µF 10V
C521	ECEA0JKA470	Electrolytic	47 µF 6.3V
C522	ECEA0JU102	Electrolytic	000 µF 6.3V
C523-525	ECEA1AKS330	Electrolytic	33 µF 10V (KA)
C526	ECEA0JKA331	Electrolytic	330 µF 6.3V

REF.NO.	PART NO.	DESCRIPTION	
C527	ECEA1AKA101	Electrolytic	100 µF 10V
C528	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C529	ECEA1CKA100	Electrolytic	10 µF 16V
C530	ECEA1AKA220	Electrolytic	22 µF 10V
C531	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C532	ECEA1HKS3R3	Electrolytic	3.3 µF 50V
C533	ECEA0JKA331	Electrolytic	330 µF 6.3V
C534	ECEA0JU102	Electrolytic	1000 µF 6.3V
C535,536	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C537	ECEA0JKA470	Electrolytic	47 µF 6.3V
C538,539	ECEA1CKA470	Electrolytic	47 µF 16V
C540-543	ECSF1CE336	Tantalum	33 µF 16V
C544-559	ECSF1CE106	Tantalum	10 µF 16V
C561-568	ECSF1CE106	Tantalum	10 µF 16V
C569	ECSF1CE226	Tantalum	22 µF 16V
C570-572	ECSF1CE106	Tantalum	10 µF 16V
C573	ECSF1CE226	Tantalum	22 µF 16V
C574	ECSF1CE106	Tantalum	10 µF 16V
C575,576	ECSF1CE226	Tantalum	22 µF 16V
C577-580	ECSF1CE106	Tantalum	10 µF 16V
C581	ECSF1CE226	Tantalum	22 µF 16V
C582-589	ECSF1CE106	Tantalum	10 µF 16V
C590	ECSF1CE336	Tantalum	33 µF 16V
C591-597	ECSF1CE106	Tantalum	10 µF 16V
C598,599	ECEA1EKN4R7	Electrolytic	4.7 µF 25V
C600	YF400101CHJT	Ceramic	100 pF
C601	YWT316B104MT	Ceramic	0.1 µF
C602	YF400101CHJT	Ceramic	100 pF
C603	YWT316B224MT	Ceramic	0.22 µF
C604	YWT316B104MT	Ceramic	0.1 µF
C605,606	YF400030CHDT	Ceramic	3 pF
C607,608	YWT316B104MT	Ceramic	0.1 µF
C610-616	YF400101CHJT	Ceramic	100 pF
C617	YF400330CHJT	Ceramic	33 pF
C618,619	YF400471CHJT	Ceramic	470 pF
C620,621	YF400101CHJT	Ceramic	100 pF
C622	YF400471CHJT	Ceramic	470 pF
C623,624	YF400101CHJT	Ceramic	100 pF
C625,626	YF400471CHJT	Ceramic	470 pF
C627	YF400101CHJT	Ceramic	100 pF
C628	YF400471CHJT	Ceramic	470 pF
C629-631	YF400101CHJT	Ceramic	100 pF
C633	YF400471CHJT	Ceramic	470 pF
C634,635	YF400104FZT	Ceramic	0.1 µF
C637,638	YWT316B104MT	Ceramic	0.1 µF
C639	YF400101CHJT	Ceramic	100 pF
C640,641	YWT316B104MT	Ceramic	0.1 µF
C642,643	YF400103XKT	Ceramic	0.01 µF
C645,646	YF400103XKT	Ceramic	0.01 µF
C647-650	YF400101CHJT	Ceramic	100 pF
C652,653	ECSF1CE106	Tantalum	10 µF 16V
C654	ECSF1CE105	Tantalum	1 µF 16V
C655	EECF5R5U105	Electrolytic	1 µF 16V
C657	ECEA1CKA330	Electrolytic	33 µF 16V
C658	ECEA1CKA470	Electrolytic	47 µF 16V

REF.NO.	PART NO.	DESCRIPTION	
C659,660	YF400104FZT	Ceramic	0.1 µF
C661-663	YF400224FZT	Ceramic	0.22 µF
C664,665	YF400104FZT	Ceramic	0.1 µF
C666	YF400101CHJT	Ceramic	100 pF
C667	YF400390CHJT	Ceramic	39 pF
C669	YF400104FZT	Ceramic	0.1 µF
C672-675	YF400330CHJT	Ceramic	33 pF
C676-679	YF400101CHJT	Ceramic	100 pF
C680-683	YF400331CHJT	Ceramic	330 pF
C684	ECKF1H331KB	Ceramic	330 pF 50V
C685-696	YF400221CHJT	Ceramic	220 pF
C697-700	YF400104FZT	Ceramic	0.1 µF
C701-703	YF400224FZT	Ceramic	0.22 µF
C704-706	YF400104FZT	Ceramic	0.1 µF
C707-710	YF400221CHJT	Ceramic	220 pF
C711-717	YF400471CHJT	Ceramic	470 pF
C718	YF400101CHJT	Ceramic	100 pF
C719-722	ECEA1CKA100	Electrolytic	10 µF 16V
C723,724	YWT316B104MT	Ceramic	0.1 µF
C725,726	ECSF1EE106	Tantalum	10 µF 25V
C727	ECSF1CE336	Tantalum	33 µF 16V
C728	YWT316B104MT	Ceramic	0.1 µF
C729	YF400104FZT	Ceramic	0.1 µF
C730	ECSF1CE106	Tantalum	10 µF 16V
C731	YWT316B104MT	Ceramic	0.1 µF
C732	ECSF1CE106	Tantalum	10 µF 16V
C733,734	YWT316B104MT	Ceramic	0.1 µF
C735	ECST1CC106	Tantalum	10 µF 16V
C737,738	YWT316B104MT	Ceramic	0.1 µF
C740,741	YF400271CHJT	Ceramic	270 pF
C742,743	ECCF1H330JC	Ceramic	33 pF 50V
L1,2	ELC08D082	Coil	
L3-6	ELESE1R0KA	Coil	1 µH
L8	ELESE100KA	Coil	10 µH
L9	ELESE1R0KA	Coil	1 µH
L10	ELESE100KA	Coil	10 µH
L11,12	ELESE1R0KA	Coil	1 µH
L13	ELESE100KA	Coil	10 µH
L14-16	ELESE1R0KA	Coil	1 µH
L17-19	ELESE100KA	Coil	10 µH
L20,21	ELESE1R0KA	Coil	1 µH
L22-24	ELESE100KA	Coil	10 µH
L25-28	ELESE220KA	Coil	22 µH
L29,30	ELESE1R0KA	Coil	1 µH
L31-33	YWS5LE0554	Coil	
L300-302	ELESE100KA	Coil	10 µH
L303-306	YFBL02RN2R62	Coil	2.6 µH
X1,2	YFMS30917M10	Crystal Oscillator	
X3,4	YWN8R4R40625	Crystal Oscillator	
X5	YWCSA1966MXT	Crystal Oscillator	

REF.NO.	PART NO.	DESCRIPTION
CN3	YW530140810	8-pin Connector
CN5	YWF794P030LA	30-pin Connector
CN9	YW6091027	10-pin Connector
CN13	YWF794P026LA	26-pin Connector
CN16	YWF794P020LA	20-pin Connector
CN12	YW530141010	10-pin Connector
TP1-8	YWRCS3216TPV	Test Point
M13	YWV2HA1097A2	Upper Shield Cover
M43	YWV2HA1095A1	Shield Case
M44	YWV2HA1096A2	Bottom Shield Cover

REAR BOARD

PCB8 (RTL)	YWJKZMX30P4A	Printed Circuit Board Assy
CN10	YWF795P016LA	16-pin Connector
CN11	YWF795P040LA	40-pin Connector
JK1	YWB0096	Jack
JK2	YWT6575AABA	Jack
JK3	YWB0096	Jack
JK4	YWT6575AABA	Jack
JK5	YWB0096	Jack
JK6	YWT6575AABA	Jack
JK7	YWB0096	Jack
JK8	YWT6575AABA	Jack
JK9	YWB0096	Jack
JK10	YWT6575AABA	Jack
JK11,12	YWP2200B	Jack

WIPE BOARD

PCB9 (RTL)	YWJKZMX50P6A	Printed Circuit Board Assy
VR1	EWVAAK001B15	Variable Resistor 100K ohms

ACCESSORY PARTS/PACKAGING PARTS

M50	YWV8QA2935AN	Operating Instructions
M51	XZB26X40C05	Polyethylene Bag
M52	XZB55X71C1	Polyethylene Bag
M55	YWV9CA1942AN	Packaging Assy
M56	YWV8FA0200A4	Packaging Label for WJ-MX30/B